2020

# Annual Report


TransUnion

# Letter from our President and CEO

**Dear fellow shareholders,**

2020 was a year of compounding crises: a global pandemic that took millions of lives and crippled economies around the world; profound social justice movements; and significant political unrest in the United States and other nations. Amidst these unprecedented challenges, we also witnessed the resiliency of the human spirit; the ability to stay connected even while distant; the resourcefulness to manage caregiving, working and all facets of life simultaneously; and the strength to persevere through fear and uncertainty.

I am proud of the work that TransUnion and our 8,200 associates did to help our customers and consumers around the world to manage through the uncertainty of 2020 and to position themselves to emerge from the pandemic safe and sound.

We accomplished this through collaboration and innovation – finding new ways to make trust possible for consumers, customers and the broader communities we serve.

To highlight our success, I want to focus on three areas:

1. *Our ability to deliver **financial results** with revenue growth at an attractive margin even during a period of global economic disruption*
2. *Our continued **investments in growth** areas that will help us deliver strong long-term value and performance*
3. *Our heightened **commitments to sustainability** through focus on environmental, social and governance issues, and particularly supporting racial equity both within and outside of TransUnion*

## Financial Results

Despite the challenges of 2020, we delivered solid financial results, achieving two percent organic constant currency revenue growth, and maintained an attractive margin. We diligently managed our balance sheet to protect against pandemic-related uncertainties and we voluntarily pre-paid $150 million of debt. We also invested in growth initiatives for long-term success; funding a few acquisitions to build our Media vertical and making a number of smart minority investments across our business units.

Our financial results were bolstered by our ability to quickly address the urgent needs of both consumers and customers through the pandemic. We supported consumers by providing free weekly credit reports. We delivered relevant new solutions, such as CreditVision® Acute Relief scores and attributes providing customers with actionable insights into consumers' behaviors. And we saw the benefits of our diversified portfolio – with Consumer Interactive and our Public Sector, Tenant and Employment Screening, and Insurance verticals all growing in 2020.

## Investments in Growth

To ensure our continued success, we invested in several ambitious initiatives to fundamentally strengthen TransUnion: Project Rise (technology transformation), Global Operations and Global Solutions. I provide below an update on the significant progress we made in 2020 on these key projects.

**Project Rise** is our initiative to create a more scalable, secure, efficient and effective technology foundation for TransUnion. Like many technology-enabled companies, we have the opportunity to streamline our software universe through reworking our applications using a common set of enterprise software services and migrating to a public cloud service provider. We have already analyzed more than 1,000 applications to determine whether we refactor, rehost, replatform or retire them, which will allow us to simplify the delivery of intellectual property on a global basis, reduce costs and increase our speed-to-market.

Our transition to a hybrid cloud model has already allowed us to power key international opportunities in countries such as India and Chile, as well as to integrate the companies within our Media vertical.

As we leverage the growing arsenal of innovative, cloud-based tools to enable faster product development, we have delivered the first set of foundational cloud services to our development teams and migrated key applications.

We have also made considerable progress in training our internal cloud teams with 80 percent having completed or currently enrolled in cloud training, including hundreds receiving full AWS certification. This allows us to continuously evolve and stay nimble in the future as well as provide a meaningful and attractive destination for top tech talent around the world.

**Global Operations** embarked upon a series of initiatives in 2020 focusing on our global collaboration systems, teams and processes. These efforts are resulting in greater efficiencies through centralization, process optimization and automation – creating meaningful improvements toward an optimal customer journey.

We continue to expand on the success of our Global Capability Center, or GCC, in Chennai, India, which now employs more than 900 associates. Over the past year, we have added two new GCCs to the TransUnion footprint: one in Pune, India and one in Johannesburg, South Africa – further expanding our ability to flex capacity and safeguard our global business continuity. They also allow us to cost-effectively process more sophisticated and confidential work than we could using third parties.

And of course, we are focused on business process refinement and automation to enhance customer experience. Most significantly, we are implementing a standardized global CRM system that, coupled with our GCCs, forms an effective technology and operational fulfillment spine for transparent, high quality customer support.

**Global Solutions** enables us to develop key solutions centrally and deliver them across our geographies and verticals. This central team incorporates inputs and ideas from all our regions, allowing TransUnion to offer truly innovative solutions to our customers. We have quickly executed against many opportunities, and I highlight some representative examples.

We undertook a thorough review of our diverse set of fraud solutions and recognized the opportunity to integrate the best of our various offerings into a standardized, unified global solution, which we are rebranding under the TruValidate™ brand. We are refocusing our sales efforts to bring these improved fraud solutions to existing and new customers around the world.

We also created and offered several solutions to assist customers with the uncertainties created by the COVID-19 pandemic, including our CreditVision® Acute Relief attributes, which allowed financial institutions to enhance their portfolio risk assessments when historical models were no longer reliable.

We built a digital onboarding solution for our international customers to address the massive increase in e-commerce activity, allowing them to easily leverage our bundled suite of data pre-fill, ID verification, credit scoring and origination decisioning tools.

We are expanding into the Income and Employment Verification space through partnerships with a leading U.S. payroll processor and an aggregator of consumer contributed financial data. Finally, we are providing social determinants of health tools to keep Americans healthy, which has never been more important than it is now.

## Commitments to Sustainability

At TransUnion, we recognize success means more than commercial results. It is also dependent upon our commitment to making a material and sustained difference to society.

**Diversity, Equity and Inclusion** - Across our company, we continue to focus on diversity and inclusion among our associates, our offerings and in the communities we serve.

In 2020, we appointed Teedra Bernard as our first-ever Chief Talent and Diversity Officer, ensuring a diversity and inclusion lens is applied to all our human capital management decisions. With Teedra and the support of TransUnion's executive leadership, we are formalizing our commitments towards diversity. I was a founding signatory to The Chicago Network's Equity Pledge to strive toward achieving gender equity in global leadership roles by 2030. And I signed the "CEO Action for Diversity & Inclusion Pledge™" to advance diversity and inclusion in the workplace. In 2021, executive compensation at TransUnion will be dependent on the company increasing the year-year-over representation of underrepresented minorities in Director and above positions within the United States and increasing the year-over-year representation of females at the Vice President level or above globally.

In 2020, we also created the TransUnion Racial Equity Task Force to prioritize and coordinate efforts to support racial equity and social justice both within and outside TransUnion. The task force will amplify our advocacy and outreach through consumer tools and support designed to improve access to economic opportunity like our partnership with the Credit Builders Alliance, which helps underserved communities build credit. The Task Force is also re-examining the use of data in our analytics and solutions to ensure that all uses are consistent with our values and the goal of financial inclusion in the economies that we serve.

**Environmental, Social and Governance** - We continue to strengthen our overall commitment to sustainability through greater measurement and disclosure around salient ESG metrics as well as the establishment of meaningful targets. We look forward to sharing this good work in greater detail with you in our upcoming Sustainability Report, where we will provide details around limiting our environmental footprint and maintaining robust security, compliance and governance programs to ensure consumer privacy, data integrity and the overall security of information under our stewardship.

I want to close by thanking our associates, our Board of Directors, and our shareholders for your continued faith in TransUnion. I hope this letter has provided a glimpse into the innovative, solutions-oriented approach we are bringing to our customers and consumers to prepare them for the inevitable changes that a post-pandemic world will bring. We look forward to health and hope in 2021.

Chris Cartwright

**CHRIS CARTWRIGHT**
President and Chief Executive Officer

# UNITED STATES
# SECURITIES AND EXCHANGE COMMISSION
**Washington, D.C. 20549**

## FORM 10-K

**(Mark One)**

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the fiscal year ended December 31, 2020**

**- OR -**

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

**For the transition period from ______ to ______**

**Commission file number 001-37470**

# TransUnion
**(Exact name of registrant as specified in its charter)**

| | |
|---|---|
| **Delaware**<br>**(State or other jurisdiction of incorporation or organization)** | **61-1678417**<br>**(I.R.S. Employer Identification Number)** |
| **555 West Adams, Chicago, Illinois**<br>**(Address of principal executive offices)** | **60661**<br>**(Zip Code)** |

**312-985-2000**
**(Registrant's telephone number, including area code)**

**Securities Registered Pursuant to Section 12(b) of the Act:**

| Title of each class | Trading Symbol(s) | Name of each exchange on which registered |
|---|---|---|
| **Common Stock, par value $0.01 per share** | **TRU** | **New York Stock Exchange** |

**Securities Registered Pursuant to Section 12(g) of the Act:**
**None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.
☒ Yes ☐ No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.
☐ Yes ☒ No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. ☒ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232-405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). ☒ Yes ☐ No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer", "accelerated filer", "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

| | |
|---|---|
| ☒ Large accelerated filer | ☐ Accelerated filer |
| ☐ Non-accelerated filer | ☐ Smaller reporting company |
| | ☐ Emerging growth company |

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒ Yes ☐ No

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). ☐ Yes ☒ No

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant was approximately $16.5 billion as of June 30, 2020 (based on the closing stock price of such stock as quoted on the New York Stock Exchange).

As of January 31, 2021, there were 190.7 million shares of TransUnion common stock outstanding, par value $0.01 per share.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the Proxy Statement of TransUnion for the Annual Meeting of Stockholders to be held May 11, 2021 are incorporated by reference to the extent specified in Part III of this Form 10-K.

**TRANSUNION**
**ANNUAL REPORT ON FORM 10-K**
**YEAR ENDED DECEMBER 31, 2020**
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**Cautionary Notice Regarding Forward-Looking Statements**

This Annual Report on Form 10-K, including the exhibits hereto, contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on the current beliefs and expectations of TransUnion’s management and are subject to significant risks and uncertainties. Actual results may differ materially from those described in the forward-looking statements. Any statements made in this report that are not statements of historical fact, including statements about our beliefs and expectations, are forward-looking statements. Forward-looking statements include information concerning possible or assumed future results of operations, including descriptions of our business plans and strategies. These statements often include words such as “anticipate,” “expect,” “guidance,” “suggest,” “plan,” “believe,” “intend,” “estimate,” “target,” “project,” “should,” “could,” “would,” “may,” “will,” “forecast,” “outlook,” “potential,” “continues,” “seeks,” “predicts,” or the negatives of these words and other similar expressions.

Factors that could materially affect our financial results or such forward-looking statements include:

- the effects of the COVID-19 pandemic on the economy;
- the duration of the COVID-19 pandemic and the timing of the economic recovery following the COVID-19 pandemic;
- macroeconomic and industry trends and adverse developments in the debt, consumer credit and financial services markets;
- our ability to provide competitive services and prices;
- our ability to retain or renew existing agreements with large or long-term customers;
- our ability to maintain the security and integrity of our data;
- our ability to deliver services timely without interruption;
- our ability to maintain our access to data sources;
- government regulation and changes in the regulatory environment;
- litigation or regulatory proceedings;
- regulatory oversight of critical activities;
- our ability to effectively manage our costs;
- economic and political stability in the United States and international markets where we operate;
- our ability to effectively develop and maintain strategic alliances and joint ventures;
- our ability to timely develop new services and the markets’ willingness to adopt our new services;
- our ability to manage and expand our operations and keep up with rapidly changing technologies;
- our ability to make acquisitions and successfully integrate the operations of acquired businesses and realize the intended benefits of such acquisitions;
- our ability to protect and enforce our intellectual property, trade secrets and other forms of intellectual property;
- our ability to defend our intellectual property from infringement claims by third parties;
- the ability of our outside service providers and key vendors to fulfill their obligations to us;
- further consolidation in our end-customer markets;
- the increased availability of free or inexpensive consumer information;
- losses against which we do not insure;
- our ability to make timely payments of principal and interest on our indebtedness;
- our ability to satisfy covenants in the agreements governing our indebtedness;

- our ability to maintain our liquidity;
- share repurchase plans; and
- our reliance on key management personnel.

There may be other factors, many of which are beyond our control, that may cause our actual results to differ materially from the forward-looking statements, including factors disclosed under the sections entitled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” in this report. You should evaluate all forward-looking statements made in this report in the context of these risks and uncertainties.

The forward-looking statements contained in this report speak only as of the date of this report. We undertake no obligation to publicly release the result of any revisions to these forward-looking statements, to reflect the impact of events or circumstances that may arise after the date of this report.

# PART I

Unless the context indicates otherwise, any reference to the "Company," "we," "us," and "our" refers to TransUnion and its direct and indirect subsidiaries.

## ITEM 1 BUSINESS

### Overview

TransUnion is a leading global information and insights company that strives to make trust possible between businesses and consumers, working to ensure that each person is reliably and safely represented in the marketplace. At TransUnion, we find innovative ways to leverage data and information to help businesses and consumers transact with confidence and achieve great things. We call this Information for Good.

Grounded in our legacy as a credit reporting agency, we have built a robust and accurate database of information for a large portion of the adult population in the markets we serve. We use our data fusion methodology to link and match an increasing set of other disparate data to further enrich our database. We use this enriched data, combined with our expertise, to continuously develop more powerful and useful solutions for our customers, all in accordance with global laws and regulations. Because of our work, organizations can better understand consumers in order to make more informed decisions, and earn consumer trust through great, personalized experiences, and the proactive extension of the right opportunities, tools and offers. In turn, we believe consumers can be confident that their data identities will result in the opportunities they deserve.

We provide consumer reports, actionable insights and analytics such as credit and other scores, and technology solutions to businesses. Businesses embed our solutions into their process workflows to acquire new customers, assess consumer ability to pay for services, identify cross-selling opportunities, measure and manage debt portfolio risk, collect debt, verify consumer identities and investigate potential fraud. Consumers use our solutions to view their credit profiles and access analytical tools that help them understand and manage their personal information and take precautions against identity theft. We have deep domain expertise across a number of attractive industries, which we also refer to as verticals, including Financial Services, Healthcare, Insurance and other markets we serve. We have a global presence in over 30 countries and territories across North America, Latin America, Europe, Africa, India, and Asia Pacific.

Our addressable market includes the data and analytics market, which continues to grow as companies around the world recognize the benefits of building an analytical enterprise where decisions are made based on data and insights, and as consumers recognize the importance that data and analytics play in their ability to procure goods and services and protect their identities. There are several underlying trends supporting this market growth, including the creation of large amounts of data, advances in technology and analytics that enable data to be processed more quickly and efficiently to provide business insights, and growing demand for these business insights across industries and geographies. Leveraging our more than 50 year operating history and our established position as a leading provider of information and insights, we have advanced our business by investing in a number of strategic initiatives such as evolving our technology infrastructure to leverage both internal and external capabilities as appropriate to best serve our customers, expanding the breadth and depth of our data, strengthening our analytics capabilities and enhancing our business processes. As a result, we believe we are well positioned to expand our share within the markets we currently serve and capitalize on the larger data and analytics opportunity.

Our solutions are based on a foundation of financial, credit, alternative credit, identity, bankruptcy, lien, judgment, healthcare, insurance claims, automotive and other relevant information obtained from thousands of sources including financial institutions, private databases and public records repositories. We refine, standardize and enhance this data using sophisticated algorithms to create proprietary databases. Our technology infrastructure allows us to efficiently integrate our data with our analytics and technology capabilities to create and deliver innovative solutions to our customers and to quickly adapt to changing customer needs. Our deep analytics resources, including our people and tools driving predictive modeling and scoring, customer segmentation, benchmarking and forecasting, enable us to provide businesses and consumers with better insights into their data. Our technology solutions capabilities, which are generally delivered on a software-as-a-service platform, allow businesses to interpret data and apply their specific qualifying criteria to make decisions and take actions. Collectively, our data, analytics and technology solutions capabilities allow businesses to authenticate the identity of consumers, effectively determine the most relevant products for consumers, retain and cross-sell to existing consumers, identify and acquire new consumers and reduce loss from fraud and data breaches. Similarly, our capabilities allow consumers to see how their credit profiles have changed over time, understand the impact of financial decisions on their credit scores, manage their personal information and take precautions against identity theft.

We leverage our differentiated capabilities in order to serve a global customer base across multiple geographies and industry verticals. We offer our solutions to business customers in Financial Services, Healthcare, Insurance and other industries, and our customer base includes many of the largest companies in the industries we serve. We sell our solutions to leading consumer lending banks, credit card issuers, alternative lenders, auto insurance carriers, auto lenders, healthcare providers, and federal, state and local government agencies. We have been successful in leveraging our brand, our expertise and our solutions in our global operations and have a leading presence in several high-growth international markets. Millions of consumers across the globe also use our data to help manage their personal finances and take precautions against identity theft.

We believe we have an attractive business model that has highly recurring and diversified revenue streams, low capital requirements, significant operating leverage and strong and stable cash flows. The proprietary and embedded nature of our solutions and the integral role that we play in our customers' decision-making processes have historically translated into high customer retention and revenue visibility. We continue to demonstrate organic growth by increasing our sales to existing customers, innovating new solutions and gaining new customers. We have a diversified portfolio of businesses across our segments, reducing our exposure to cyclical trends in any particular industry vertical or geography. We operate primarily on a contributory data model in which we typically obtain updated information including a growing set of public record and alternative data at little or no cost, as we develop new solutions and expand into new industries and geographies. We are evolving our hybrid public-private technology infrastructure to ensure that our systems remain highly secure, reliable, and performant by design. We are focused on processes and foundational technology that allows us to leverage demand-led consumption from public cloud providers and from our high performance privately owned infrastructure.

On March 11, 2020, the World Health Organization declared COVID-19 a global pandemic and recommended extensive containment and mitigation measures worldwide. The pandemic has reached all of the regions in which we do business, and governmental authorities around the world have implemented numerous measures attempting to contain and mitigate the effects of the virus, including travel bans and restrictions, border closings, quarantines, shelter-in-place orders, shutdowns, limitations or closures of non-essential businesses, school closures, social distancing requirements and various economic stimulus initiatives. While certain of these measures have been relaxed or reversed to varying degrees throughout the world, many have been subsequently reinstated and even tightened, adding an additional layer of uncertainty. In the fourth quarter of 2020, several COVID-19 vaccines were approved for use by various governments throughout the world, including in the United States. The vaccines have begun to be distributed and administered in the United States and various other regions where we operate, with varying degrees of success. The ultimate success of these efforts will also be impacted by vaccine manufacturers' ability to successfully produce and effectively distribute adequate doses of the vaccine in a timely manner, the availability of a sufficient number of healthcare workers to administer the vaccines, as well as the public's perception of the safety of the vaccines and their willingness to receive them, among others.

The global spread of COVID-19 and actions taken in response to the virus continue to negatively affect workforces, customers, consumer confidence, financial markets, employment rates, consumer spending, credit markets and housing demand, cause significant economic, business and social disruptions, volatility and financial uncertainty, and have led to a significant economic downturn, including in the markets where we operate. Businesses and consumers continue to react and adapt to the uncertainty with varying degrees of success in the markets where we operate. Since mid-March 2020, the COVID-19 pandemic, widespread measures implemented to contain its effects, and business and consumer responses to such measures, have had a material and adverse impact on numerous aspects of our business, including customer demand for our services and solutions in all of our segments. While we have seen signs of increased demand for our services in the markets where we operate since the low point in April 2020, including ongoing improvements through the fourth quarter of 2020, the impact of COVID-19, including government measures and business and consumer responses to such measures, may continue to have a material adverse impact on our business and financial results for an uncertain period of time.

In the face of these challenges, our primary focus has been and continues to be the health and safety of our associates, our customers, and the wider communities in which we operate. We quickly and effectively moved to a work-from-home model in the early days of the pandemic in every market we serve, and continue to adhere to that model. This has allowed us to protect our associates and the broader population while continuing to operate our businesses and provide services and solutions to customers and consumers. We remain focused on ensuring impacted consumers are aware of resources and relief available to them, and we are working with trade associations and industry peers to facilitate access to resources and educational materials aimed at consumers.

During this challenging period, our total revenues increased from $2.656 billion for the year ended December 31, 2019 to $2.717 billion for the year ended December 31, 2020, representing a year-over-year increase of 2.3%. Our Net Income attributable to TransUnion decreased from $346.9 million for the year ended December 31, 2019, to $343.2 million for the year ended December 31, 2020, representing a year-over-year decrease of 1.1%. Our Adjusted EBITDA decreased from $1,058.9 million for the year ended December 31, 2019 to $1,044.9 million for the year ended December 31, 2020, representing a year-over-year decrease of 1.3%. As of December 31, 2020, the book value of our debt was $3.454 billion. See Part II, Item 7, "Management's Discussion and Analysis of Financial Conditions and Results of Operations—Key Performance Measures," for our definition of Adjusted EBITDA and the reconciliation to net income attributable to TransUnion.

**Our Evolution**

We are dedicated to evolving our legacy as a global information and insights company that makes trust possible, so businesses and consumers can transact with confidence and achieve great things. Our business has over 50 years of operating history and a long track record of providing information and insights to businesses and consumers while continuing to innovate to meet their changing needs. Since our founding as a provider of regional credit reporting services, we have built a comprehensive, valuable, and unique database of U.S. consumers to build solutions that span many industry verticals and customer processes. We expanded our operations by targeting new customers, industry verticals and geographies and also entered the consumer solutions space. We have strengthened our analytics and technology solutions capabilities and acquired complementary datasets and technologies enabling us to enhance our solutions, diversify our revenue base and expand into other verticals, such as Healthcare, Media and Insurance. We continue to grow our global presence, creating and acquiring credit reporting agencies in new geographies and establishing strong international footholds to expand into other emerging markets. We also expanded the reach of our consumer solutions by partnering with other market leaders and innovators.

As part of our continued evolution, we have invested in a number of strategic initiatives that we believe will allow us to cater to the growing demand for data and analytics, provide differentiated solutions and better serve our customers. These initiatives include:

- ***Investing in our Technology:*** Technology is at the core of the solutions we provide to our customers. We continue to make significant investments to evolve our technology infrastructure by leveraging both internal and external resources. We also leverage the latest data and analytics technologies which enable us to be quicker, more efficient and more cost-effective. Our significant ongoing investments allow us to organize and handle high volumes of disparate data, improve delivery speeds, provide better availability, strengthen product development capabilities and continue to invest in information security on the basis of risk, while lowering our overall cost structure. Our technology allows us to build capabilities and leverage them across multiple geographies and industry verticals.

- ***Expanding our Data:*** We continue to invest in the breadth and depth of our data. We introduced the concept of trended data to provide the trajectory of a consumer's risk profile, used public records data to enhance the scope of business issues we can address, incorporated alternative data into our databases to allow for a more comprehensive risk assessment of banked and unbanked consumers, and have made several recent acquisitions in our Media vertical to add yet another dimension to our ability to match data in a digital world. We believe we are the largest provider in the United States of both nationwide consumer credit data and comprehensive, diverse public records data. We continue to improve the quality of our data, provide deeper insights into risk and create differentiated solutions for our customers.
- ***Strengthening our Analytics Capabilities:*** We have strengthened our analytics capabilities by leveraging modern technology and differentiated data assets, strategic acquisitions, utilizing more advanced tools and growing our analytics team. This has allowed us to create solutions that produce greater insights and more predictive results, which help our customers make better decisions. Our strengthened analytics capabilities have also shortened our time-to-market to create and deliver these solutions to our customers.
- ***Broadening our Target Markets:*** We have grown our target markets by establishing a presence in attractive high-growth and strategic international markets such as the United Kingdom, India, Colombia and the Philippines. We have also established and grown our presence in diversified verticals such as Healthcare, Insurance, Public Sector, and Media, as well as expanded the reach of our consumer offerings by partnering with traditional and emerging providers in new verticals. Our capabilities enable us to develop scalable products that we are able to deploy across new markets and verticals globally.
- ***Enhancing our Business Processes and Capabilities:*** We continue to enhance our business processes and capabilities to support our growth. We have developed technology centers-of excellence, common tools and technologies, and redundancy and disaster recovery plans. We have hired additional industry experts, which has allowed us to create and sell new vertical-specific solutions that address our customers' needs. Our global sales force structure includes dedicated teams for our largest customers, shared sales teams for our mid-sized customers, and call center support teams for our smaller customers, which increases our sales team's effectiveness across our target markets.

We believe that our ongoing focus on evolving with the market and with our customers' needs ensures continued improvement in our overall services to businesses and consumers. Leveraging our trusted brand, global scale and strong market position in the verticals we serve will allow us to capitalize on business opportunities worldwide and contribute to our long-term growth.

### Our Market Opportunity

We believe we are well-positioned to capitalize on the long-term trend of businesses and consumers using data and analytics to make more informed decisions and manage risk more effectively. As worldwide spending on data and analytics increases, we believe there are several key trends in the global macroeconomic environment affecting the geographies and industry verticals we serve that will create increasing demand for our solutions:

- ***Rapid Growth in Data Creation and Application:*** Larger and more diversified datasets are now assembled faster while the breadth of analytical applications and solutions has expanded. Companies are increasingly relying on business analytics and data technologies to help process this data in a cost-efficient manner. Non-traditional sources of data have become important in deriving alternative metrics. The proliferation of smartphones and other mobile devices generates enormous amounts of data tied to consumers, activities and locations. We believe that the demand for targeted data and sophisticated analytical solutions will continue to grow meaningfully as businesses seek real-time access to more granular views of consumer populations and more holistic views on individual consumers.

- ***Advances in Technology and Analytics Unlocking the Value of Data:*** Ongoing advances in data collection, storage and analytics technology have contributed to the greater use and value of data and analytics in decision making. As businesses have gained the ability to rapidly aggregate and analyze data, they increasingly expect access to real-time data and analytics from their information providers as well as solutions that fully integrate into their workflows. We believe this has made sophisticated technology critical for gaining and retaining business in the risk and information services industry.
- ***Greater Adoption of Data Solutions Across New and Existing Industry Verticals:*** With the proliferation of data, we believe companies across new and existing industry verticals recognize the value of risk information and analytical tools, particularly when tailored to their specific needs.
    - ***Financial Services Industry:*** The combination of increased capital requirements, additional compliance costs and the overhang of legacy assets is pushing large segments of small-to-medium-sized business and consumer lenders out of the banking sector, resulting in the creation of new specialty finance companies, such as peer-to-peer lending platforms and online balance sheet lenders, which are actively filling the void. These technology-enabled lending platforms provide access to credit in a fast and efficient manner by utilizing sophisticated risk assessment tools that leverage data, such as behavioral data, transactional data and employment and credit information. At the same time, traditional financial services companies are also increasing the use of applications and data in order to address regulatory requirements, lower operating costs and better serve their customers.
    - ***Healthcare Industry:*** Greater patient financial responsibility, focus on cost management and regulatory supervision are all driving healthcare providers to use data and related analytics tools to better manage their revenue cycle. For example, to reduce collection risks, healthcare providers seek information about their patients' insurance coverage and ability to pay at the time of registration. Insurance discovery tools are increasingly being utilized to optimize accounts receivable management, maximize collections and minimize uncompensated care.
    - ***Insurance Industry:*** As consumers increasingly obtain quotes from multiple insurers in an effort to lower their costs, insurers are trying to improve the accuracy of their risk assessments and initial quotes. For example, insurance carriers are using driver violation data to uncover offenses that will impact pricing earlier in the quoting process so consumers have a more accurate view of the premiums they will be charged.
    - ***Other Emerging Verticals****:* We also offer solutions in a diversified portfolio of other emerging verticals such as Media, Collections, Tenant and Employment, Public Sector, Diversified Markets and other verticals. Within the Media vertical, our highly accurate consumer data helps companies improve their marketing investments through solutions that provide more targeted audience segments to reach the right consumers across digital channels. In Collections, our solutions improve third party collectors' bottom line and help provide a quality customer experience by delivering actionable consumer insights and services. Our Tenant and Employment business provides data and insights to make informed investment, hiring, and rental decisions. Our suite of solutions in the Public Sector gives government agencies the superior data assets, analytics, and security they need to manage compliance and boost services for the constituents they serve. We also offer data-driven solutions in other verticals that address the entire customer lifecycle in industries such as technology, retail and e-commerce, communications and energy, and services and screening.

- ***Increasing Lending Activity in Emerging International Markets:*** As economies in emerging markets continue to develop and mature, we believe there will continue to be favorable socio-economic trends, such as an increase in the size of the middle class and a significant increase in the use of financial services by under-served and under-banked consumers. In addition, credit penetration is relatively low in emerging markets when compared to developed markets. For example, using our database of information compiled from financial institutions as a benchmark of credit activity, we estimate that approximately 30% of the adult population in India is currently credit active. Furthermore, the widespread adoption and use of mobile phones in emerging markets have enabled greater levels of financial inclusion and access to banking and credit. We expect the populations in emerging markets to continue to become more credit active, resulting in increased demand for our services.
- ***Increased Management and Monitoring of Personal Financial Information and Identity Protection by Consumers:*** We expect demand for consumer solutions to continue to rise with greater consumer awareness of the importance and usage of their credit information, increased risk of identity theft due to data breaches and increasingly available free credit information. The proliferation of mobile devices has also made data much more accessible, enabling consumers to manage their finances and monitor their information in real-time. We believe these trends will continue to drive growth for our consumer business.

## Our Competitive Strengths

### *Comprehensive and Unique Datasets*

Our long operating history and thought leadership in the industry have allowed us to build comprehensive and unique data assets that would be difficult for a new market entrant to replicate. Our solutions are based on a foundation of financial, credit, alternative credit, identity, bankruptcy, lien, judgment, healthcare, insurance claims, automotive and other relevant information obtained from thousands of sources including financial institutions, private databases, public records repositories, and other alternative data sources. We refine, standardize and enhance this data using sophisticated algorithms to create proprietary databases. We are constantly updating our data to keep it current, and we continue to identify opportunities to acquire additional data. We believe that our data is unique and differentiates us from our competitors. We own several proprietary datasets such as consumer credit information, driver violation history, healthcare eligibility information, business data and rental payment history. Our global data assets encompass alternative data, such as the voter registry in India, a vehicle information database in South Africa, and a mobile device database from our acquisition of iovation, Inc. ("iovation"). We have also acquired public record datasets, which are time consuming and difficult for others to obtain and associate with the correct person. We believe we are the largest provider of scale in the United States to possess both nationwide consumer credit data and comprehensive, diverse public records data, which allows us to better predict behaviors, assess risk and address a broader set of business issues for our customers.

### *Technology Infrastructure*

While technology advances never cease, we continue to evolve our infrastructure and our capabilities to efficiently interface with our clients in the business ecosystems in which we participate. The need to further expand and evolve our enterprise approach to technology has become more significant as TransUnion has increasingly become a global company. Our technology infrastructure allows us to continually improve our overall services to businesses and consumers and ensures that we are well positioned to differentiate our datasets and capabilities. We believe our technology infrastructure capabilities have resulted in increased throughput, improved data matching, greater efficiency, advanced platform flexibility, better information security, and lower operating costs.

- ***Powerful Data Capabilities:*** Our technology gives us the ability to process, organize and analyze high volumes of data across multiple operating systems, databases and file types as well as to deal with both structured and unstructured data that changes frequently. We process billions of transactions on a daily basis.

- ***Enhanced Linking and Matching:*** Because our data matching technology is able to interrelate data across disparate sources, industries and time periods, we believe that we are able to create differentiated datasets and provide our customers with comprehensive insights that allow them to better evaluate risk. For example, our *TLOxp* solution leverages these data matching capabilities across various datasets to identify and investigate relationships among people, assets, locations and businesses, allowing us to offer enhanced due diligence, threat assessment, identity authentication and fraud prevention and detection solutions.
- ***Continuing Evolution of Our Hybrid Public-Private Cloud Infrastructure:*** At the beginning of 2020, we announced an initiative to further enhance our technology infrastructure through a three-year investment that we refer to as Project Rise. This investment is a continuing evolution of our hybrid public-private cloud infrastructure, a significant upgrade to our existing infrastructure. Project Rise is an initiative designed to ensure that our technology is even more effective, efficient, secure and reliable, which we believe will enable us to perform at our highest level across all of TransUnion. Our investment will be concentrated in streamlining processes, increasing automation, and rapidly adopting a hybrid public and private cloud approach globally. The benefits we expect to realize under Project Rise include:
    - refactoring and optimizing our applications into a more modern API-based and microservices-oriented architecture.
    - simplifying the delivery of our intellectual property on a global basis, further increasing our speed-to-market. We will more easily push our intellectual property into the public cloud and then pull it down for use in a given market. This approach will help us continue our rapid international expansion and more effortlessly deploy solutions across our markets.
    - creating meaningful scaled economies around company-driven consumption of our infrastructure using cloud-based technology. We will consume and pay for only needed infrastructure as we develop new applications. Using this infrastructure-as-code approach eliminates the time-consuming manual provisioning process and replaces it with auto-provisioning from either the private cloud or a public cloud provider.
    - utilizing readily available innovative tools from cloud-service providers instead of developing them ourselves. This shift will enable faster product development through new compliance tools, model training, machine learning and other cutting-edge technologies. By employing more highly automated tools with auto-provisioning infrastructure, our developers will focus on value-added, revenue generating work, freeing them from traditional preparation and enablement activities.
    - accessing the new public cloud business models. For example, public cloud providers have been building application and data marketplaces. This move will help ensure that no matter how data and applications are delivered to customers, whether through a public cloud marketplace or our own Prama DataHub, we will be able to participate.

***Sophisticated and Flexible Analytics and Technology Solutions Capabilities***

We have developed sophisticated and flexible analytics and technology solutions capabilities by investing in technology, tools and people. Our technology allows us to quickly build sophisticated analytics and technology solutions functionality that caters to our customers' evolving needs. Our analysts leverage our technology infrastructure and data matching capabilities to gain real-time access to our entire dataset across different data sources and run analyses across this data while remaining compliant with permitted data use. Our analysts are typically able to create data samples for model development, model validations and custom analyses in less than one day using self-serve data access. Our analysts are equipped with a diverse modeling and analytical toolkit, such as visualization and machine learning, which allows them to quickly build and deploy these capabilities. We have an experienced analytics team with substantial industry experience, complemented by a deep knowledge of consumer credit data. Our team is highly qualified with advanced degrees or doctorates in statistics, math, finance or engineering, and is instrumental in understanding customer requirements, sourcing raw data and turning that data into solutions that provide insights and decisions to solve our customers' problems.

***Innovative and Differentiated Solutions***

We consistently focus on innovation to develop new and enhanced solutions that meet the evolving needs of our customers. We believe our specialized data, analytics and solution services and collaborative approach with our customers differentiate us from our competitors. Our solutions are often scalable across different customers, geographies and verticals. Several examples of our innovative and differentiated solutions include:

- ***CreditVision***: We continue to enhance our credit data by including new data fields, enriching values in existing data fields and expanding account history. Our enhanced credit data has been combined with hundreds of algorithms to produce *CreditVision* and *CreditVision Link*, first to market and market-leading solutions that provide greater granularity and evaluate consumer behavior patterns over time. This results in a more predictive view of the consumer, increases the total population of consumers who can effectively be scored and helps consumers gain improved pricing.

- ***CreditVision Acute Relief Solution suite:*** Today's uncertain economic environment continues to impact consumer behavior and performance. Using FCRA-governed data, this newly released set of trended credit attributes and accompanying score provides a more precise view of consumers impacted by acute economic conditions, enabling more clarity to help our customers manage accounts appropriately. *CreditVision Acute Relief Attributes* help identify credit relationships and payment behaviors for consumers previously or currently in relief status during acute economic conditions, allowing support strategies to be adjusted if necessary. *CreditVision Acute Relief Risk Score* uses trended usage and payment data as strong leading indicators of risk, enhancing insights during acute situations.

- ***CreditView***: *CreditView* is an interactive dashboard that provides consumers with credit information and educational tools in a comprehensive, user-friendly format. Consumers are able to easily see how their credit profiles have changed over time, receive alerts on key credit changes, simulate the impact of financial decisions on their credit score, and see relevant offers for financial products.

- ***TLOxp***: *TLOxp* leverages our data matching capabilities across thousands of data sources to identify and investigate relationships among specific people, assets, locations and businesses. This allows us to offer enhanced due diligence, threat assessment, identity authentication and fraud prevention and detection solutions, and to expand our solutions into new verticals such as government and law enforcement.

- ***DriverRisk:*** Leveraging our driver violation database, we developed *DriverRisk*, a data and analytic solution that helps auto insurance carriers cost effectively validate driving records and assess risk during the underwriting and renewal process to improve returns.

- ***Insurance Discovery Solutions***: Our robust insurance discovery platform helps identify incomplete, inaccurate, or missing patient data to find maximum coverage for our healthcare customers. Our solutions explore all possible avenues to identify hard-to-find coverage from third-party payers, resulting in healthier bottom lines.

- ***IDVision with iovation:*** *IDVision with iovation* provides insights based on experience with billions of unique mobile devices, and offers an enhanced suite of identity management, authentication and fraud prevention solutions that protect businesses from fraud. With our holistic fraud solution, businesses and consumers can safely and seamlessly transact in a digital world.

- ***Prama:*** *Prama* provides insights on data through a self-service, visual platform built to help understand consumer behavior, identify growth opportunities, and improve portfolio profitability. Through tools such as *Market Insights, Vintage Analysis, Benchmarking, Data Extract,* and *Attribute Manager*, *Prama* delivers on-demand consumer credit insights for better loan portfolio analysis.

- ***Audience Segmentation*****:** Our technology platform leverages data science and machine learning technology to quickly model, build, and distribute custom audiences based on our customer's criteria. The platform quickly translates multiple data points into insights and effective audiences, which leads to higher return on advertising spend in digital marketing channels.
- ***TransUnion Seamless Onboarding:*** Customers in many emerging markets often lack an effective seamless online onboarding tool. As COVID-19 reduced or eliminated in-person interaction, we created a digital onboarding solutions package that bundles our robust suite of pre-fill, ID verification, credit solutions tools. We deliver this solution to our customers via a single API, customized to their needs. Customers can deploy this digital onboarding solution as a mobile app, mobile website or as a white label tool built into their own platforms. We quickly launched this solution in India, South Africa, Colombia and the Philippines, creating a multi-million dollar business in less than a year, and are looking to leverage this success to build solutions in our developed markets.

***Deep and Specialized Industry Expertise***

We have deep expertise in a number of attractive industry verticals including Financial Services, Healthcare and Insurance. Our expertise has allowed us to develop sophisticated vertical-specific solutions within these targeted industries that play an integral role in our customers' decision-making processes and are often embedded into their workflows. Our team includes industry experts with significant experience in the verticals that we target and relationships with leading companies in those verticals. We also have regulatory compliance expertise across the industries that we serve. Together, this expertise provides us with a comprehensive understanding of business trends and insights for customers in these verticals, allowing us to build solutions that cater to these customers' specific requirements. We have been able to apply our industry knowledge, data assets, technology and analytics capabilities to develop new solutions and revenue opportunities within key verticals. For example, in Financial Services, our differentiated position allowed us to anticipate the increased demand from alternative consumer lending providers such as peer-to-peer lending platforms, so we created solutions that catered to these emerging providers. In Insurance, we partnered with a vehicle history data provider to launch a vehicle history score that helps insurance carriers further segment risk based on the attributes of a specific automobile. In Healthcare, we developed a solution that allows healthcare providers to search for additional health insurance coverage and recover additional uncompensated care costs.

***Leading Presence in Attractive International Markets***

We have been operating internationally for over 30 years and have strong global brand recognition. We have strategically targeted attractive international markets in both developed and emerging economies and have a diversified global presence, including a strong presence in Canada, Latin America, the United Kingdom, Africa, India, and Asia Pacific. Local senior management in our International markets provide us with deeper insights into these markets and stronger relationships with our customers. We have leveraged our brand, operating history, global footprint and technology infrastructure to establish new credit bureaus in several international markets, such as Canada in 1989, India in 2001 and the Philippines in 2011. Once we establish a foothold in a region, our model is to expand the services we offer within these markets and then move into adjacent emerging markets. For example, we have used our operations in Hong Kong to expand into other Asia Pacific countries and provide analytic scoring models in the Philippines, Singapore, Malaysia and Thailand. We have used our operations in South Africa to expand into neighboring African countries. We have also entered new markets through strategic acquisitions, including the United Kingdom in 2018, Colombia in 2016, and Brazil in 2011.

***Proven and Experienced Management Team***

Our senior management team has a proven track record of strong performance and significant expertise in the markets we serve, with an average of over twenty years of industry experience. We continue to attract and retain experienced management talent for our businesses. Our team has deep knowledge of the data and analytics sector and expertise across the various industries that we serve. Our team has overseen our expansion into new industries and geographies, while managing ongoing strategic initiatives including our significant technology investments. As a result of the sustained focus of our management team, we have been successful in consistently driving growth, both organically and through acquiring and integrating businesses.

## Our Growth Strategy

### *Enhance Underlying Data, Technology and Analytics Capabilities to Develop Innovative Solutions*

As the demand for data and analytics solutions grows across industries and geographies, we will continue to expand the scope of our underlying data, improve our tools and technology and enhance our analytics and technology solutions capabilities to provide innovative solutions that address this demand. As the needs of businesses and consumers continue to evolve, we continue to help them meet their challenges, which our ongoing investments in data, technology and analytics enable us to do more quickly and efficiently. With our insights and information, our customers can explore connections between people, businesses, assets and locations; identify assets, uncover inconsistencies and identify misrepresentations; and uncover evidence of financial distress.

Our continuous technology investments have also reduced the time to market for new solutions, which allow us to react quickly to customer requirements. In addition, these investments also improve efficiency, reliability, security, and performance. We also continue to take advantage of strategic partnerships that differentiate us from our competitors. For example, by leveraging our fast, available, and secure technology infrastructure and working together with one of our strategic partners we were able to provide real-time credit decisions in a matter of seconds, enabling the use of a new virtual credit card through consumers' digital wallets.

### *Further Penetrate Existing Industry Verticals with Current and New Solutions*

We are a leading provider of risk and information solutions in several industry verticals today, including Financial Services, Healthcare and Insurance. We believe there is significant opportunity for further growth within these industries by expanding the number of customers to whom we sell our current solutions as well as by creating innovative new solutions that we can use to grow our presence in these industries. We focus on developing new solutions that address evolving customer needs within our industry verticals. In the Financial Services vertical, we launched *Prama*, a self-service, visual platform that enables access to massive anonymized data sets for benchmarking and attribute development. We also developed *CreditVision*, which provides customers with a time-based risk trend and increases the total eligible population of consumers. Similarly, in Insurance, we introduced the *DriverRisk* solution that leverages our driver violation database to cost effectively identify drivers with ratable violations, resulting in unique insights into driver risk, reduced costs, and higher returns for insurance carriers. In order to more effectively address these opportunities, we have redeployed and reallocated our sales resources to focus either on new customer opportunities or on selling additional services and solutions to existing customers. With our leading market positions, existing strong relationships in Financial Services, Healthcare and Insurance verticals, and with our consumer partners, we believe we have the opportunity to further penetrate our existing customer base and capture a strong proportion of their spending across the consumer lifecycle.

### *Establish Positions in New, Adjacent Industry Verticals*

In addition to increasing penetration in industries where we have a substantial presence, we continue to create solutions that address customer needs in attractive new industries. Our strategy is to develop new solutions for a specific application, industry, or geography, and then deploy these solutions to other markets where they may be applicable. We believe that our capabilities allow us to quickly create and deliver solutions to new industries and geographies where information-based analytics and technology solutions capabilities are currently underutilized. For example, our strong position in Financial Services and Insurance verticals has allowed us to establish a presence in the Healthcare vertical to capitalize on the increasing demand for data and analytics solutions.

Combining our in-house expertise with recent acquisitions, we have created a comprehensive suite of holistic front-end and back-end solutions in the healthcare revenue cycle management industry. We have created innovative solutions that help engage patients early, ensure earned revenue is paid and optimize payment strategies. We continue to target other verticals such as Public Sector, Tenant and Employment, and Media, where we see opportunities to leverage our existing data, analytics and technology solutions capabilities.

***Expand our Presence in Attractive International Markets***

We believe international markets present a significant opportunity for growth. We have significant scale in some of the world's fastest growing markets, such as India and Latin America, which positions us to take advantage of the favorable dynamics in these regions as their populations become more credit active. We leverage solutions developed in the United States and deploy them to international markets, after localizing them to individual market requirements. For example, after launching *CreditVision* in the United States, we have expanded our offerings with similar solutions globally. In markets where we have established a presence in a particular vertical, we will expand further into adjacent verticals, such as Insurance and Consumer Solutions. We intend to continue to expand into new geographic markets by forming alliances with financial services institutions, industry associations and other local partners, and by pursuing strategic acquisitions. Across all our international expansion initiatives, we will continue to leverage our technology infrastructure to drive speed to market, scale and differentiation.

***Broaden Our Reach in Consumer Market through Direct and Indirect Channels***

Our consumer business continues to deliver growth with strong margins, driven by our innovative solutions and flexible and collaborative partnership model that has expanded the market for consumer services, along with greater consumer awareness of the value of their credit information and increased risk of identity theft. Our strategy is to grow our own member base in the direct channel as well as expand our reach through partnerships in the indirect channel. Across both channels, our focus is on delivering value-added solutions and features while continuing to improve the consumer experience with more user-friendly interfaces and better customer service and educational tools. Within our indirect channel, we will continue to leverage and enhance our flexible technology platform to expand our relationship with existing partners as well as develop relationships with new partners and enter new verticals. We believe that partnerships not only enable us to grow our own business, but also expand the overall market and provide us access to new consumer segments. We will also continue to leverage our approach in the U.S. consumer market to expand our consumer operations globally.

***Pursue Strategic Acquisitions***

We will continue to pursue acquisitions to accelerate growth within our existing businesses and diversify into new businesses. We are focused primarily on opportunities that expand our geographic footprint, increase the breadth and depth of our datasets, enhance our services, provide us with industry expertise in our key verticals and deepen our presence in our international markets.

We have expanded our geographic footprint in new countries such as the United Kingdom, Brazil, Chile, and Colombia in the last several years. In June 2018, we entered the world's second largest credit market in the U.K. Our U.K. business provides data, analytics and technology solutions to help businesses and consumers make informed decisions across a diverse group of industries. With a strong record of growth and innovation in both core credit and emerging solutions we have achieved strong market success in the U.K.

In our Media vertical, we have made three recent acquisitions - Tru Optik Data Corp ("Tru Optik") and Signal Digital, Inc. ("Signal") in 2020, and TruSignal, Inc. ("TruSignal") in 2019, which provide us with an industry-leading position within a clearly defined part of the Media industry. These acquisitions allow us to deliver more real-time targeted data across online streaming services to improve our customers' digital marketing campaigns. Together with TransUnion's complementary capabilities, these acquisitions will allow us to enhance the customer base with higher accuracy and transparency that is missing in current identity and audience development products in the digital marketing space.

We enhanced our fraud and identity management service offerings when we acquired iovation in June 2018, one of the most advanced providers of device-based information in the world. We launched *IDVision with iovation*, which combines our extensive personal data with iovation's digital data to offer an enhanced suite of identity management, authentication and fraud prevention solutions that protect businesses from fraud while improving the online user experience. This results in a global network of fraud and risk insights that help businesses to quickly and accurately determine authentic customers from fraudulent ones.

Our 2017 acquisitions of FactorTrust, Inc., a provider of consumer reporting models that captures a wide range of positive payment behaviors, and eBureau, LLC, a leading provider of custom analytic solutions with both credit-risk and anti-fraud applications demonstrate our commitment to build upon our success as a source of groundbreaking and versatile data and analytics capabilities.

We also developed a comprehensive set of domestic solutions in the Healthcare vertical. In June 2018, we acquired Healthcare Payment Specialists, Inc. By focusing on payment areas where superior technology and deep domain expertise can drive significant improvements, this part of our Healthcare business helps providers maximize Medicare reimbursements, which account for approximately 20% of total healthcare expenditures in the U.S. We also acquired Rubixis, Inc. ("Rubixis") in October 2018. Rubixis' revenue cycle optimization capabilities, particularly around denials and underpayments, round out our Healthcare solutions and positions us as the leader in revenue recovery for providers seeking to maximize reimbursement and prevent revenue leakage.

We have a strong track record of integrating acquisitions and driving long-term value creation, and we will continue to maintain a disciplined approach to pursuing acquisitions.

## Segment Overview

We manage our business and report our financial results in three reportable segments: U.S. Markets, International and Consumer Interactive. We also report expenses for Corporate, which provides shared services and conducts enterprise functions. See Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," Part II, Item 8 "Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements," and Note 18, "Reportable Segments," for further information about our reportable segments.

### *U.S. Markets*

Our U.S. Markets segment provides consumer reports, actionable insights and analytics such as credit and other scores, and technology solutions capabilities to businesses. These businesses use our services to acquire new customers, assess consumer ability to pay for services, identify cross-selling opportunities, measure and manage debt portfolio risk, collect debt, verify consumer identities and investigate potential fraud.

We deliver our solutions across multiple industry vertical markets and report disaggregated revenue as follows:

*Financial Services:* The Financial Services vertical, which accounts for approximately 55.4% of our 2020 U.S. Markets revenue, consists of our consumer lending, mortgage, auto and cards and payments lines of business. Our financial services customers consist of most banks, credit unions, finance companies, auto lenders, mortgage lenders, online-only lenders (FinTech), and other consumer lenders in the United States. We also distribute our solutions through most major resellers, secondary market players and sales agents. Beyond traditional lenders, we work with a variety of credit arrangers, such as auto dealers and peer-to-peer lenders. We provide solutions across every aspect of the lending lifecycle; customer acquisition and engagement, fraud and ID management, retention and recovery. Our products are focused on mitigating risk and include credit reporting, credit marketing, analytics and consulting, identity verification and authentication and debt recovery solutions.

*Emerging Verticals:* Emerging verticals include Healthcare, Insurance, Tenant and Employment, Collections, Public Sector, Media, Diversified Markets and other verticals. Our solutions in these verticals are also data-driven and address the entire customer lifecycle. We offer onboarding and transaction processing products, scoring and analytic products, marketing solutions, fraud and identity management solutions and customer retention solutions.

Within U.S. Markets, we leverage our comprehensive data assets, data matching expertise and predictive analytics to develop risk-based solutions:

- ***Comprehensive Data Assets:*** Our credit database contains the name and address of substantially all of the U.S. credit-active population, a listing of their existing credit relationships and their timeliness in repaying debt obligations. The information in our database is voluntarily provided by thousands of credit-granting institutions and other data furnishers. We enhance our data assets with alternative credit sources. We also actively source information from courts, government agencies and other public records including suits, liens, judgments, bankruptcies, professional licenses, real property, vehicle ownership, other assets, driver violations, criminal records and contact information for certain databases. Our databases are updated, reviewed and monitored on a regular basis.
- ***Predictive Analytics:*** Our predictive analytics capabilities allow us to analyze our proprietary datasets and provide insights to our customers to allow them to drive better business decisions. Our tools allow customers to investigate past behavior, reasonably predict the likelihood of future events and strategize actions based on those predictions. We have numerous tools such as predictive modeling and scoring, customer segmentation, benchmarking, forecasting, fraud modeling and campaign optimization, all of which cater to specific customer requirements. Our predictive analytics capabilities are developed by an analytics team with deep industry experience and a broad array of specialized qualifications.

### *International*

The International segment provides services similar to our U.S. Markets segment to businesses in select regions outside the United States. Depending on the maturity of the credit economy in each country, services may include credit reports, analytics and technology solutions services and other value-added risk management services. We also have insurance, business and automotive databases in select geographies. These services are offered to customers in a number of industries including financial services, retail credit, insurance, automotive, collections, public sector and communications, and are delivered through both direct and indirect channels. The International segment also provides consumer solutions similar to those offered by our Consumer Interactive segment to help consumers proactively manage their personal finances. We report disaggregated revenue of our International segment for the following regions:

*Canada*: We have operated in Canada since 1989 and are one of only two nationwide consumer reporting agencies in the Canadian market. We operate across multiple verticals in Canada with leading positions in insurance and automotive with a strong and growing presence in Financial Services. Our Canadian customer base encompasses some of the largest companies in their verticals, including many of the top banks, credit card issuers, insurance companies and auto manufacturer lenders.

*Latin America:* We have been active in Latin America since 1985 when we entered the Puerto Rican market, and now operate in numerous Central and South American countries, including a strong presence in two major markets - Colombia and Brazil. We also have significant credit bureau businesses in the Dominican Republic and Chile, and a 25.69% ownership interest in Trans Union de México, S.A., the primary credit reporting agency in Mexico. In Guatemala, we maintain a centralized database that services Guatemala, Nicaragua and Costa Rica.

*United Kingdom:* In June 2018, we entered the world's second largest credit market, the United Kingdom, when we acquired Callcredit, the second largest consumer credit bureau in the U.K. Our U.K. business provides data, analytics and technology solutions to help businesses and consumers make informed decisions across a diverse group of industries, and serves a broad set of customers including leading financial institutions and customers in other attractive, high-growth segments.

*Africa:* We launched our operations in Africa by entering South Africa in 1993, and have since expanded into many surrounding countries. We are highly diversified and serve a variety of industries through traditional consumer credit reporting services, insurance solutions, auto information solutions, and commercial credit information services. We provide risk and information solutions in Africa to many of the leading banks, retailers, auto dealer groups, and insurance companies.

*India:* In 2001, we partnered with prominent Indian financial institutions to create CIBIL, the first consumer and business credit reporting agency in India. We have since launched the country's first generic credit score, which is the most widely used credit score across the financial services industry in India. In the absence of a comprehensive national ID, we created an innovative matching algorithm that allowed us to create the most extensive consumer credit database in India. We also own or have access to several non-credit data sources that we use to enhance our solutions, including the national voters' registry, the confirmed and suspected fraud registry, property registry and tax ID database. We offer a suite of risk and information solutions across the credit lifecycle for banks, telecommunication companies and insurance companies, as well as consumer solutions such as online credit reports and scores. India has become our second largest and our fastest growing region.

*Asia Pacific:* Our operations in Asia Pacific include markets such as Hong Kong, the Philippines, Thailand, Singapore, and China. Asia Pacific is a growing market with increasing demand for credit driven by a rising middle class that offers significant growth potential in analytics and technology solutions. We do business with many of the top financial institutions in the countries we serve. We have had a majority ownership interest in the principal consumer credit reporting company in Hong Kong since 1998. In partnership with leading credit card issuers in the Philippines, we launched the first consumer credit reporting agency in that market in 2011. We have also built credit risk scores for the National Credit Bureau of Thailand, in which we have a 12.25% ownership interest, the Credit Bureau of Singapore and the Credit Bureau of Malaysia.

***Consumer Interactive***

The Consumer Interactive segment offers solutions that help consumers manage their personal finances and take precautions against identity theft. Services in this segment include credit reports and scores, credit monitoring, fraud protection and resolution, and financial management for consumers. The segment also provides solutions that help businesses respond to data breach events. Our products are provided through user-friendly online and mobile interfaces and are supported by educational content and customer support. Our Consumer Interactive segment serves consumers through both direct and indirect channels.

*Direct:* We provide services directly to consumers, primarily on a subscription basis through websites and mobile applications. Product features include credit reports, credit scores and analysis, alerts to changes in credit information, debt analysis, debt and retirement calculators, identity protection services, and the ability to restrict third-party access to a consumer's TransUnion and Equifax credit reports through our paid subscription offering. We complement these features with educational content that explains how credit and financial data is used in various industries to evaluate consumers and how a consumer's financial choices impact this evaluation. Our integrated, data-driven marketing strategy spans multiple channels including paid search, online display and email, which allows us to efficiently acquire and retain high quality consumers.

*Indirect:* We also provide our services to partners who may offer them on a stand-alone basis or with their own or other branded services as a bundle to consumers, governmental agencies and businesses in support of fraud or credit protection, credit monitoring, identity authentication, data breach services or as a means to engage with and acquire consumers. We offer a broad suite of solutions that include many of the features, educational content and customer support available in our direct channel. We have taken a proactive and flexible partnership approach, which has resulted in long-term strategic relationships with some of the largest providers of credit information or identity protection services in the U.S. consumer market as well as with several large financial institutions. Through these partnerships, we have significantly expanded the overall market as well as the reach of our business.

***Corporate***

Corporate provides support services to each segment, holds investments and conducts enterprise functions. Certain costs incurred in Corporate that are not directly attributable to one or more of the segments remain in Corporate. These costs are typically enterprise-level costs and are primarily administrative in nature.

**Markets and Customers**

We have a highly diversified customer base that includes companies across multiple industries, including Financial Services, Healthcare and Insurance. A substantial portion of our revenue is derived from companies in the financial services industry and from sales in the United States.

We leverage our comprehensive data assets, industry expertise and our technology infrastructure, allowing us to build solutions once and deploy them multiple times across the different verticals and regions. Our evolution to a hybrid public-private cloud infrastructure augments this capability. We provide services to our customers through real-time, online delivery for services such as credit reports and predictive scores, in batch form for services that help our customers proactively acquire new customers, cross-sell to existing customers and help them monitor and manage risk, and through our software-as-a-service offerings, which include a number of solutions that help businesses interpret data, maximize reimbursements, visualize insights, predict model results and apply their customer-specific criteria to facilitate real-time automated decisions at the time of customer interaction, and through our websites to consumers, for various subscription-based and transaction-based products in the United States and in other regions we serve.

We market our services globally, primarily through our own sales force. We have dedicated sales teams for our largest customers focused by industry group and geography. These dedicated sales teams provide strategic account management and direct support to customers. We use shared sales teams to sell our services to mid-size customers. These sales teams are based in our headquarters office and in field offices strategically located throughout the United States and abroad. Smaller customers’ sales needs are serviced primarily through call centers. We also market our services through indirect channels such as resellers, who sell directly to businesses and consumers. Our interactive direct-to-consumer services are sold primarily through our website.

**Seasonality**

Seasonality in the U.S. Markets segment is correlated to volumes of online credit data purchased by our financial services and mortgage customers, and our sales have generally been higher during the second and third quarters. Seasonality in our International segment is driven by local economic conditions and relevant macroeconomic market trends. In our Consumer Interactive segment, demand for our products is usually higher in the first half of the year, impacted by seasonality and our advertising spend.

**Competition**

The market for our services is highly competitive. We compete primarily on the basis of differentiated solutions, datasets, analytics capabilities, ease of integration with our customers’ technology, stability of services, customer relationships, innovation and price. We believe that we compete favorably in each of these categories. Our competitors vary based on the business segment, industry vertical and geographical market that our solutions address.

In our U.S. Markets segment, our competition generally includes Equifax, Experian and LexisNexis, in addition to certain competitors whom we only compete with in specific industry verticals. For example, we compete with

FICO in the Financial Services vertical, with Verisk in the Insurance vertical, and with Experian Health, Waystar, and Cloudmed in the Healthcare vertical.

In our International segment, we generally compete with Equifax and Experian directly or indirectly through their subsidiaries or investments. We also compete with other competitors that may focus on a particular vertical, country or region.

In our Consumer Interactive segment, we generally compete with Equifax, Experian, FICO and LifeLock as well as emerging businesses, some of whom offer free credit information.

In addition to these competitors, we also compete with a number of other companies that may offer niche solutions catering to more specific customer requirements.

We believe the services we provide to our customers reflect our understanding of our customers' businesses, the depth and breadth of our data and the quality of our analytics and technology solutions capabilities. By integrating our services into our customers' workflows, we ensure efficiency, continuous improvement and long-lasting relationships.

## Information Technology

### *Technology*

The continuous operation of our information technology systems is fundamental to our business. Our information technology systems collect, refine, access, process, deliver and store the data that is used to provide our solutions. Customers connect to our systems using a number of different technologies, including secured internet connections, virtual private networks and dedicated network connections. Control and management of the technology that operates our business is critical to our success and to this end, we directly control and manage all of our technology and infrastructure. Our technology relies on several third-party best-of-breed solutions as well as proprietary software and tools which we integrate into our platforms. Our control of our technology and infrastructure allows us to prioritize any changes and manage the roll-out of any upgrades or changes. We contract with various third-party providers to help us maintain and support our systems.

We have established technology Centers-of-Excellence that utilize similar tools and technology in order to provide scale and efficiency in modifying existing applications and developing new applications for our businesses. We deploy new development methodologies globally to enable rapid delivery of solutions and increase our speed-to-market. Our technology team includes both our own employees as well as additional resources from third-party providers.

We believe that our technology is at the core of our innovative solutions, and we continually invest in our technology and thought leaders to be a market leader. We continue to make significant investments in our infrastructure to leverage the latest data and analytics technologies. We believe that our technology platform enables us to be quicker, more efficient and more cost-effective across each step of our process chain, including receiving, consolidating and updating data, implementing analytics and technology solutions capabilities, creating innovative solutions, delivering those solutions to our customers and incorporating customer feedback. Our platform has significant scale and capacity and enables us to deliver actionable information immediately to our customers. Our technology infrastructure gives us the ability to organize and handle high volumes of disparate data, maintain and improve our delivery speeds, increase availability and enhance our product development capabilities, while at the same time lowering our overall cost structure.

### *Data Centers and Business Continuity*

In order to create redundancy and increase resiliency, we utilize multiple data centers in all of our major markets. We generally employ similar technologies and infrastructures in each data center to enable the optimal sharing of technical resources across geographies.

We maintain a framework for business continuity that includes written policies requiring each business and operating unit to identify critical functions. Our businesses and operating units have processes in place that are designed to maintain such functions in case there is a disruptive event. We also have a specific disaster recovery plan that will take effect if critical infrastructure or systems fail or become disabled.

As part of our program, each business unit's continuity plan is periodically updated and stored in a centralized database. These plans are monitored and reviewed by our compliance team. From time to time, our compliance team tests one or more of these plans using desktop exercises or in connection with actual events. We also periodically confirm the state of preparedness of our most critical disaster recovery procedures. We maintain systems redundancy plans for our primary U.S. data centers that allow for the transfer of capacity between geographically disbursed environments in the event there is a failure of computer hardware or a loss of our primary telecommunications lines or power sources. On an enterprise basis, our systems are designed to recover most of our operational capacity in a scenario where our primary data centers become inoperable.

During the COVID-19 pandemic, our business continuity plans kept us well positioned to continue to operate when the pandemic required global lockdowns. In each of the markets we serve, we quickly and effectively moved to a work-from-home model that we continue to adhere to. This has allowed us to protect our associates and the broader population while continuing to operate our businesses and provide services and solutions to customers and consumers.

***Security***

The security and protection of non-public consumer information is one of our highest priorities. TransUnion's written information security program focuses on managing risk and fulfilling global information security regulations and standards, including ISO/IEC 27001:2013, NIST CSF, PCI-DSS, HIPAA, and other international regulatory expectations in locations where we operate. Our information security program follows a risk-based approach that continuously evaluates threats, industry events and asset values to introduce enhancements when necessary. We deploy a wide range of physical and technical safeguards that provide security around the collection, storage, use, access and delivery of information we have in our possession. These safeguards include firewalls, intrusion protection and monitoring, anti-virus and malware protection, vulnerability threat analysis, management and testing, advanced persistent threat monitoring, forensic tools, encryption technologies, data transmission standards, contractual provisions, customer credentialing, identity and access management, data loss, access and anomaly reports and training programs for associates. We, with other global financial services organizations, including U.S. nationwide consumer credit reporting companies, share cyber threat and attack information through our participation in the Financial Information Sharing and Analysis Council and other forums that may be targeted at our industry to better understand and monitor our systems and our connectivity to our customers, as well as how specific solutions that were implemented to protect against such attacks are performing. We undergo SSAE 16 reviews annually, and several of our major customers routinely audit our security controls. We conduct an annual Payment Card Industry Data Security Standard (PCI-DSS) compliance program and remain PCI certified. We regularly engage independent third-party organizations to evaluate TransUnion's security program via testing and assessments. Additionally, we hire third parties to conduct independent information security assessments.

## Intellectual Property and Licensing Agreement

Our intellectual property is a strategic advantage and protecting it is critical to our business. Because of the importance of our intellectual property, we treat our brand, software, technology, know-how, concepts and databases as proprietary. We attempt to protect our intellectual property rights under the trademark, copyright, patent, trade secret and other intellectual property laws of the United States and other countries, as well as through the use of licenses and contractual agreements, such as nondisclosure agreements. While we hold various patents, we do not rely primarily on patents to protect our core intellectual property. Through contractual arrangements, disclosure controls and continual associate training programs, our principal focus is to treat our key proprietary information and databases as trade secrets. Also, we have registered certain trademarks, trade names, service marks, logos, internet URLs and other marks of distinction in the United States and foreign countries, the most important of which is the trademark TransUnion name and logo. This trademark is used in connection with most of the services we sell and we believe it is a known mark in the industry.

We own proprietary software that we use to maintain our databases and to develop and deliver our services. We develop and maintain business-critical software that transforms data furnished by various sources into databases upon which our services are built. We also develop and maintain software to manage our consumer interactions, including providing disclosures and resolving disputes. In all business segments, we develop and maintain software applications that we use to deliver services to our customers, through a software-as-a-service model. In particular, we develop and maintain analytics and technology solutions infrastructure that we host and make available for our customers to develop and deploy analytics to improve business performance.

We license certain data and other intellectual property to other companies on arms-length terms that are designed to protect our rights to our intellectual property. We generally use standard licensing agreements and do not provide our intellectual property to third parties without a nondisclosure and license agreement in place.

We also license certain intellectual property that is important for our business from third parties. For example, we license credit-scoring algorithms and the right to sell credit scores derived from those algorithms from third parties for a fee.

### Our History

TransUnion Corp. was spun-off from its parent, Marmon Holdings, Inc. in 2005 to the Pritzker family. On June 15, 2010, an affiliate of Madison Dearborn Partners, LLC, on behalf of certain of its investment funds, acquired 51.0% of our outstanding common stock from the Pritzker family and certain employee and director stockholders of TransUnion Corp. On April 30, 2012, TransUnion Corp. was acquired by TransUnion Holding Company, Inc., substantially all the common stock of which was owned by Advent International Corporation and The Goldman Sachs Group, Inc. On March 26, 2015, TransUnion Holding Company, Inc. was renamed TransUnion and TransUnion Corp. was renamed TransUnion Intermediate Holdings, Inc. On June 30, 2015, we completed the initial public offering of our common stock at a public offering price of $22.50 per share. Our stock trades on the New York Stock Exchange under the ticker “TRU.”

### Legal and Regulatory Matters

Compliance with legal and regulatory requirements is a top priority. We are subject to numerous laws governing the collection, protection, dissemination and use of non-public personal information, credit information and other information. These laws are enforced by U.S. federal, state and local regulatory agencies, foreign regulatory authorities and, in some instances, through private civil litigation. Our failure to comply with applicable legal and regulatory requirements could have a negative impact on our financial condition or overall operations.

We proactively manage our compliance with laws and regulations through a global and legal compliance department that ensures enterprise standards are followed. Through the legal and compliance functions, we provide training to our associates, monitor all material laws and regulations, establish compliance policies, routinely review internal processes to determine whether business practice changes are warranted, assist in the development of new services, and promote regular meetings with principal regulators and legislators to establish transparency in our operations and create a means to understand and react should any issues arise.

#### *U.S. Data and Privacy Protection*

Our U.S. operations are subject to numerous laws and regulations governing privacy, data security, consumer protection and the use of consumer credit or an individual’s healthcare information. Certain of these laws provide for civil and criminal penalties for the unauthorized release of, or access to, this protected information. The laws and regulations that affect our U.S. business include, but are not limited to, the following:

- *Fair Credit Reporting Act (the "FCRA")*: FCRA applies to consumer credit reporting agencies, including us, as well as data furnishers and users of consumer reports. FCRA promotes the accuracy, fairness and privacy of information in the files of consumer reporting agencies that engage in the practice of assembling or evaluating information relating to consumers for certain specified purposes. FCRA limits what information may be reported by consumer reporting agencies, limits the distribution and use of consumer reports, establishes consumer rights to access and dispute their own credit files, includes provisions designed to prevent identity theft and assist fraud victims, requires consumer reporting agencies to make a free annual credit report available to consumers and imposes many other requirements on consumer reporting agencies, data furnishers and users of consumer report information. Violation of FCRA can result in civil and criminal penalties. Regulatory enforcement of FCRA is under the purview of the Federal Trade Commission (the "FTC"), the Consumer Financial Protection Bureau (the "CFPB") and state attorneys general, acting alone or in concert with one another.
- *The Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank Act")*: A central purpose of the Dodd-Frank Act is to "protect consumers from abusive financial services practices, and for other purposes." The Dodd-Frank Act also prohibits unfair, deceptive or abusive acts or practices ("UDAAP") with respect to consumer financial products and provides the CFPB with authority to enforce those provisions. The CFPB has stated that its UDAAP authority may allow it to find statutory violations even where a specific regulation does not prohibit the relevant conduct, or prior published regulatory guidance or judicial interpretation has found the activity to be in accordance with law.
- *The Economic Growth, Regulatory Relief, and Consumer Protection Act (the "EGRRCPA")*: In May 2018, Congress passed the EGRRCPA, which amended certain parts of the Dodd-Frank Act, FCRA and other U.S. federal laws applicable to us. Specifically, FCRA was amended to require that a credit reporting agency provide consumers with at least one year to submit a fraud alert to the credit reporting agency. The law also amended the FCRA for purposes of implementing a national security freeze that credit reporting agencies must provide free of charge upon formal request by a consumer. The credit freeze prevents credit reporting agencies from disclosing the content of a consumer report. Credit reporting agencies must also notify consumers of this right and provide instructions on how to implement and lift a credit freeze. The law increases veteran credit protection by implementing a process to remove inaccurate medical information and veteran medical debt and creates standards for verifying veteran medical debt. In addition, credit reporting agencies are required to provide free credit reporting monitoring, which requires notifying the consumer of any changes to his or her file, to any active duty military consumer.
- *State unfair and deceptive practices acts and practices laws*: Many states have enacted statutes that prohibit unfair and deceptive acts and practices, relating to, among other things, marketing, disclosures and billing practices within the state or directed to consumers within the state. The Company and others in the industry may be subject to these laws with respect to the marketing of consumer credit information products.
- *Gramm-Leach Bliley Act (the "GLBA")*: The GLBA regulates, among other things, the receipt, use and disclosure of non-public personal information of consumers held by financial institutions, including us. Several of our datasets are subject to GLBA provisions, including limitations on the use or disclosure of the underlying data and rules relating to the technological, physical and administrative safeguarding of non-public personal information. Violation of the GLBA can result in civil and criminal liability. Regulatory enforcement of the GLBA is under the purview of the FTC, the CFPB, the federal prudential banking regulators, the SEC and state attorneys general, acting alone or in concert with each other.

- *Drivers' Privacy Protection Act (the "DPPA")*: The DPPA requires all states to safeguard certain personal information included in licensed drivers' motor vehicle records from improper use or disclosure. The DPPA limits the use of this information sourced from State departments of motor vehicles to certain specified purposes, and does not apply if a driver has consented to the release of their data. The DPPA imposes criminal fines for non-compliance and grants individuals a private right of action, including actual and punitive damages and attorneys' fees. The DPPA provides a federal baseline of protections for individuals, and is only partially preemptive, meaning that except in a few narrow circumstances, state legislatures may pass laws to supplement the protections made by the DPPA. Many States are more restrictive than the federal law.
- *Data security breach laws*: All states and some territories have adopted data security breach laws that may require notice be given to affected consumers in the event of a breach of personal information, and in some cases the provision of additional benefits such as free credit monitoring to affected individuals. Some of these laws require additional data protection measures over and above the GLBA data safeguarding requirements. If data within our system is compromised, we may be subject to provisions of various state security breach laws, including regulatory investigations or enforcement actions from state attorneys general, who enforce state data breach or unfair and deceptive practices laws.
- *Identity theft laws*: Under the federal EGRRCPA, consumers can place a security freeze on their credit reports to prevent others from opening new accounts or obtaining new credit in their name and obtain one-year of fraud alerts free of charge. In addition, all states and the District of Columbia have passed laws that give consumers the right to place a security freeze on their credit report. Generally, these state laws require us to respond to requests for a freeze within a certain period of time, to send certain notices or confirmations to consumers in connection with a security freeze and to unfreeze files upon request within a specified time period.
- *Federal Trade Commission Act (the "FTC Act")*: The FTC Act prohibits unfair methods of competition and unfair or deceptive acts or practices. We must comply with the FTC Act when we market our services, such as consumer credit monitoring services through our Consumer Interactive segment. Our data collection, use and disclosure practices and the security measures we employ to safeguard the personal data of consumers could also be subject to the FTC Act, and our data practices or our failure to safeguard data adequately may subject us to regulatory scrutiny or enforcement action. There is no private right of action under the FTC Act.
- *The Credit Repair Organizations Act ("CROA")*: CROA regulates companies that claim to be able to assist consumers in improving their credit standing. Some courts have applied CROA to credit monitoring services offered by consumer reporting agencies and others. CROA allows for a private right of action and permits consumers to recover all money paid for alleged "credit repair" services in the event of violation. We, and others in our industry, have settled purported consumer class actions alleging violations of CROA without admitting or denying liability.
- *The Health Insurance Portability and Accountability Act of 1996, as amended by the American Recovery and Reinvestment Act of 2009 ("HIPAA") and the Health Information Technology for Economic and Clinical Health Act ("HITECH")*: HIPAA and HITECH require companies to implement reasonable safeguards to prevent intentional or unintentional misuse or wrongful disclosure of protected health information. In connection with receiving data from and providing services to entities in the healthcare industry or providing services to the healthcare industry, we may handle data subject to HIPAA and HITECH requirements. We obtain protected health information from healthcare providers and payors of healthcare claims that is subject to the privacy, security and transactional requirements imposed by HIPAA. We are frequently required to secure HIPAA-compliant "business associate" agreements with the providers and payors who supply data to us. As a business associate, we are obligated to limit our use and disclosure of health-related data to certain statutorily permitted purposes, HIPAA regulations, as outlined in our business associate agreements, and to preserve the confidentiality, integrity and availability of this data. HIPAA and HITECH also require, in certain

circumstances, the reporting of breaches of protected health information to affected individuals and to the United States Department of Health and Human Services. A violation of any of the terms of a business associate agreement or noncompliance with HIPAA or HITECH data privacy or security requirements could result in administrative enforcement action and/or imposition of statutory penalties by the United States Department of Health and Human Services or a state attorney general. HIPAA and HITECH requirements supplement but do not preempt state laws regulating the use and disclosure of health-related information; state law remedies, which can include a private right of action, remain available to individuals affected by an impermissible use or disclosure of health-related data.

- *California Consumer Privacy Act (the "CCPA"):* The CCPA requires businesses to provide California consumers with certain rights regarding their personal information: the right to be informed about the type of information collected about them, the right to opt out of the sale of their personal information, the right to request deletion of their personal information, and the right to access their personal information. The CCPA exempts much of the data whose use is covered by FCRA, GLBA, HIPAA and DPPA and therefore much of our data is not subject to the CCPA. The CCPA creates a private right of action for security breaches. On November 3, 2020, California adopted the California Privacy Rights Act (the "CPRA"), which amends and expands CCPA. It is anticipated that most of the substantive provisions of CPRA will go into effect in 2023.
- *Requirements for Government Contractors:* Special requirements may apply to TransUnion when providing services to U.S. federal, state and local government agencies. The applicable requirements depend upon the monetary value of the awarded contract, the particular government agency awarding or funding the contract, the scope of services to be delivered by TransUnion, and the level of access that the agency will need to provide to TransUnion to enable TransUnion to perform the contract. For example and without limitation, TransUnion may need to abide by the Privacy Act of 1974, the Internal Revenue Service's Publication 4812, and various Federal Acquisition Regulation and associated supplemental contract clauses. Each of these laws, regulations and contract clauses dictates particular measures for the protection of personal information or information that is otherwise categorized as sensitive by the government. Government agencies frequently modify or supplement these requirements, and consequences for violations of applicable requirements may include penalties, civil liability and for severe infractions, criminal liability.

We are also subject to U.S. federal and state laws that are generally applicable to any U.S. business with national or international operations, such as antitrust laws, the Foreign Corrupt Practices Act, the Americans with Disabilities Act and various employment laws. We continuously monitor U.S. federal and state legislative and regulatory activities that involve credit reporting, data privacy and security, and other relevant subjects to identify issues in order to remain in compliance with all applicable laws and regulations.

***International Data and Privacy Protection***

We are subject to data protection, privacy and consumer credit laws and regulations in other jurisdictions where we conduct business. These laws and regulations include, but are not limited to, the following:

- *Canada:* Personal Information Protection and Electronic Documents Act of 2000 ("PIPEDA") - The PIPEDA and substantially similar provincial laws govern how private sector organizations collect, use and disclose personal information in the course of commercial activities. The PIPEDA gives individuals the right to access and request correction of their personal information collected by such organizations. The PIPEDA requires compliance with the Canadian Standard Association Model Code for the Protection of Personal Information. Most Canadian provinces also have laws dealing with consumer reporting. These laws typically impose an obligation on credit reporting agencies to have reasonable processes in place to maintain the accuracy of the information, place limits on the disclosure of the information and give consumers the right to have access to, and challenge the accuracy of, the information.

- *Colombia:* The Colombian Financial Data Protection Regime (Law 1266 of 2008) regulates the collection, use and transfer of personal data pertaining to financial services, including credit reporting. The Colombian General Data Protection Regime (Law 1581 of 2012 and Decree 1377 of 2013) covers regulation of all other personal data. Both of these regimes have applicability to credit reporting services in Colombia and together address obligations of information furnishers, database owners, consumer right of access, consumer consent and permitted information disclosures.
- *European Union*: Our data management activities and the commercial solutions we make available to the European market are subject to the General Data Protection Regulation ("GDPR"). This law establishes significant data protection and privacy standards that empower European Union consumers to exercise significant control over their personal data. In addition to a litany of substantive provisions empowering consumers to limit how data may be used, GDPR also imposes operational, data processing, and other technical requirements with which we must comply. Failure to comply with any provision of GDPR could result in significant regulatory or other enforcement penalties.
- *United Kingdom*: Our UK operations are subject to GDPR and the Privacy and Electronic Communications Regulation (the "PECR"), which together govern the processing of personal data pertaining to UK citizens. Enforcement of data regulation and consumer privacy matters in the UK resides with the Information Commissioners Office (the "ICO"), an independent body set up to uphold the rights of individuals in relation to the use of their personal data. The provision of credit referencing services in the UK is also a regulated activity that is authorized by the Financial Conduct Authority (the "FCA"). The FCA has regulated credit reference agencies since 2014 with the objectives of protecting consumers, protecting financial markets and promoting competition. TransUnion UK (previously Callcredit), Experian and Equifax were granted full FCA authorization in early 2016 and are therefore all required to follow the rules and principles issued by the FCA.

  In 2018, the FCA introduced Open Banking which aims to improve customer experience and to increase competition in the banking sector. Consumers can share transaction data with third parties via application program interfaces ("APIs") to identify best products and take up multi-bank products. As part of Open Banking, the Second Payment Services Directive came into effect in January 2018 and affects the payments industry, allowing merchants to retrieve a customer's account data from their bank with their consent. The implementation of Open Banking platforms will increase the number of payment service providers available to consumers and will expand beyond traditional banks. TransUnion UK is an authorized information services provider under this regime.
- *South Africa*: National Credit Act of 2005 (the "NCA") - The NCA and its implementing regulations govern credit bureaus and consumer credit information. The NCA sets standards for filing, retaining and reporting consumer credit information. The NCA also defines consumers' rights with respect to accessing their own information and addresses the process for disputing information in a credit file. The NCA is enforced by The National Credit Regulator who has authority to supervise and examine credit bureaus. In addition, the Protection of Personal Information Act ("POPIA"), went into effect on July 1, 2020, with enforcement commencing on July 1, 2021. POPIA regulates the processing of personal information of legal and juristic persons, and imposes compliance obligations and sanctions.
- *India:* Credit Information Companies Regulation Act of 2005 ("CICRA") - CICRA requires entities that collect and maintain personal credit information to ensure that it is complete, accurate and protected. Entities must adopt certain privacy principles in relation to collecting, processing, preserving, sharing and using credit information. In addition, India has privacy legislation that would allow individuals to sue for damages in the case of a data breach, if the entity negligently failed to implement "reasonable security practices and procedures" to protect personal data.
- *Hong Kong:* Personal Data (Privacy) Ordinance ("PDPO") and The Code of Practice on Consumer Credit Data ("COPCCD") - PDPO and the COPCCD regulate the operation of consumer credit reference agencies. They prescribe the methods and security controls under which credit providers and credit reference agencies may collect, access and manage credit data.

- *Brazil:* The Brazilian General Data Protection Law ("LGPD"), went into effect on September 18, 2020. LGPD regulates the processing of personal information and imposes compliance obligations and sanctions comparable to those of GDPR. It is anticipated that the sanctions provisions of the LGPD will go into effect on August 1, 2021.

We are also subject to various laws and regulations generally applicable to all businesses in the other countries where we operate.

**Sustainability**

We believe that our responsibility to the world does not stop at connecting information, consumers, and clients; rather, we are dedicated to making meaningful, positive contributions to society. We are making an impact today through our commitments in advancing underrepresented people, enabling life-changing access to credit in new markets, and using trended data to help consumers improve their credit.

To determine the environmental, social, and governance ("ESG") issues most material to our business we regularly engage key stakeholders and monitor the evolving landscape. We also conduct periodic materiality assessments to ensure that the focus of the sustainability program is aligned with ESG risks and opportunities.

Our sustainability program focus areas are:

- Security, Governance, and Compliance: We maintain robust security, compliance and governance programs to ensure alignment with the requirements of our industry. In particular, we focus on consumer privacy, data integrity and the overall security of information under our stewardship.
- People, Social Innovation, and Communities: We value our people and communities, and work diligently to provide expanded opportunities in and outside the workplace. We are dedicated to providing a welcoming, diverse, inclusive and growth-oriented work environment that enables all our people to reach their full potential. We also strive to expand just and equitable economic inclusion of all communities, providing the foundation for enhanced quality of life.
- Climate Change and Environmental Footprint: We seek to limit our environmental footprint and support responsible resource use. Reducing our energy and resource use lowers our operational costs and climate change impact, helping to ensure the well-being of communities and our associates.

**Human Capital Management**

We employed approximately 8,200 employees at December 31, 2020. Central to our long-term strategy is attracting, developing and retaining the best talent globally with the right skills to drive our success. Our board of directors receives regular updates on topics including, sustainability, employee retention, engagement and survey results, enterprise compliance, investigations and associate health and safety.

Other than certain employees in Brazil, none of our employees are currently represented by a labor union or have terms of employment that are subject to a collective bargaining agreement. We consider our relationships with our employees to be good and have not experienced any work stoppages.

*Diversity Strategy*

We see diversity as a source of strength and know that it is essential to our mission, innovation and growth. At TransUnion, we know that diversity helps us win. We have a three-pronged approach to our diversity, equity and inclusion strategy consisting of the following:

- Hire: We seek to expand the diversity of our talent pool through a dedicated diversity recruiter, targeted sourcing methods and job postings.

- Develop: We cultivate diverse internal talent through development plans and customized programming for under-represented groups.
- Promote: We continue to expand our rigorous pay and promotion practices designed to remove bias, including ongoing pay equity analysis and compensation review, and development opportunities designed to ensure fair and equitable treatment of all employees.

We believe that a critical component of continuing to deliver innovative products to consumers and customers is maintaining diverse and inclusive teams. We detail below our progress in advancing diversity in our leadership and associate population in alignment with Sustainability Accounting Standards Board reporting standards. Select workforce diversity statistics for 2020 and 2019 are as follows:

| | 2020 | 2019 |
|---|---|---|
| **Percent of TransUnion's Worldwide Workforce Represented by the United States** | 51% | 51% |
| **Worldwide Gender** | | |
| Women Senior Leaders [1] | 30% | 27% |
| Women Overall [2] | 40% | 41% |
| **U.S. Race/Ethnicity [3]** | | |
| Black Senior Leaders [1] | 3% | 3% |
| Black Overall [2] | 9% | 9% |
| Hispanic Senior Leaders [1] | 7% | 6% |
| Hispanic Overall [2] | 8% | 8% |
| Asian Senior Leaders [1] | 10% | 9% |
| Asian Overall [2] | 20% | 20% |
| Other Senior Leaders [1,4] | 2% | 2% |
| Other Overall [2,4] | 2% | 2% |

1. Senior Leaders include all employees at a Vice President level or above.
2. Overall include all employees, inclusive of the Senior Leader grouping.
3. U.S. race/ethnicity diversity demographic information includes only U.S. employees who chose to self-identify and excludes those who did not self-identify.
4. Other race/ethnicity includes American Indian or Alaska Native, Native Hawaiian or Other Pacific Islanders, and those employees who disclosed two or more categories.

*Talent Acquisition and Retention*

Our talent acquisition and retention is multi-faceted. We aim to recruit the most qualified candidates, and strive for a diverse and well-balanced workforce.

We reward and support employees through competitive pay, benefits, and perquisite programs that allow employees and their families to thrive. Our benefit offerings are designed to meet the varied and evolving needs of a diverse workforce tailored to the variety of businesses and geographies in which we operate.

This year we enhanced the ways we help our employees care for themselves and their families, especially in response to the COVID-19 pandemic. This includes child care benefits that provide access to onsite or community centers, enhanced back-up care choices that include personal caregivers, child care referral assistance and child care provider discounts, help with homework and a variety of parenting educational resources. We also provide our employees with access to free mental and behavioral health resources, including on-demand access to the Employee Assistance Program for employees and their dependents.

*Employee Engagement, Training and Development*

We prioritize and invest in helping our employees grow and build their careers through several training and development programs. These include online, instructor-led and on-the-job learning formats as well as executive talent and succession planning paired with an individualized development approach.

*Safety and Wellness*

We have heightened our focus on the health and safety of our associates, our customers, and the wider communities in which we operate. We quickly and effectively moved to a work-from-home model in the early days of the pandemic in every market we serve, and continue to adhere to that model. This has allowed us to protect our associates and the broader population while continuing to operate our businesses and provide services and solutions to customers and consumers. In addition, we have taken several actions to support those who are financially impacted by the COVID-19 pandemic in the locations where we operate. We remain focused on ensuring impacted consumers are aware of resources and relief available to them, and we are working directly with our partners across the broader consumer credit ecosystem in an effort to prevent adverse impacts to consumers as a result of the pandemic. We are also working with industry peers to develop additional proactive solutions to help impacted consumers and to facilitate access to resources and educational materials aimed at consumers.

See our upcoming 2020 Sustainability Report and 2020 Diversity Report for additional information on these topics.

**Available Information**

Through our corporate website under the heading “About Us - Investor Relations,” at http://www.transunion.com*,* you can access electronic copies of our governing documents free of charge, including our Corporate Governance Guidelines and the charters of the committees of our board of directors. In addition, through our website, you can access the documents we file with the U.S. Securities and Exchange Commission (SEC), including our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, and all amendments thereto, as soon as reasonably practicable after we file or furnish them. You also may request printed copies of our SEC filings or governance documents, free of charge, by writing to our corporate secretary at the address on the cover of this report. Information contained on our website is not incorporated herein by reference and should not be considered part of this report.

In addition, the SEC maintains an Internet site (www.sec.gov) that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC.

Our corporate headquarters are located at 555 West Adams Street, Chicago, Illinois 60661, and our telephone number is (312) 985-2000.

## ITEM 1A. RISK FACTORS

You should carefully consider the following risks as well as the other information included in this report, including “Selected Financial Data,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our financial statements and related notes. Any of the following risks could materially and adversely affect our business, financial condition or results of operations. However, the selected risks described below are not the only risks facing us. Additional risks and uncertainties not currently known to us or those we currently view to be immaterial may also materially and adversely affect our business, financial condition or results of operations.

### Risks Related to the COVID-19 Pandemic

***Our results of operations have been materially and adversely impacted and could be materially and adversely impacted in the future by the COVID-19 global pandemic or the outbreak of other highly infectious diseases.***

The global spread and unprecedented impact of COVID-19 has created significant volatility, uncertainty and economic disruption. The countries and territories in which our services and solutions are sold are in varying stages of restrictions and re-opening to address the COVID-19 pandemic. Certain jurisdictions have begun re-opening only to return to restrictions in the face of increases in new COVID-19 cases. The extent to which the COVID-19 pandemic continues to materially and adversely impact our business, operations, and consolidated financial statements remains highly uncertain and will depend on numerous evolving factors that we may not be able to accurately predict, including: the duration, scope, severity, and any resurgences of the pandemic; the effectiveness of vaccine rollout plans; the public’s perception of the safety of the vaccines and their willingness to take the vaccines; the continued impact on worldwide macroeconomic conditions, including interest rates, employment rate, consumer confidence, and foreign exchange rates in each of the markets in which we operate; governmental, business, and individuals’ actions that have been, and continue to be, taken in response to the pandemic (which could include limitations on or changes to our operations or mandates to provide services); the effect on our customers; changes in customer and consumer demand for our services; the effect on consumer confidence and spending; our ability to sell and provide our services, including the impact of travel restrictions and people working from home; the ability of our customers to pay for our services; the health of, and the effect on, our workforce; and the potential effects on our internal controls, including those over financial reporting, as a result of changes in working environments for our employees and business partners.

The global spread of COVID-19, widespread measures implemented to contain its effects, and business and consumer responses to such measures have had a material and adverse impact on numerous aspects of our business, including customer demand for our services and solutions, our consolidated financial statements and the trading price of our securities. While we have seen signs of increased demand for our services in the markets where we operate since the low point in April 2020, including ongoing improvements through the fourth quarter of 2020, the impact of COVID-19 may continue to have a material and adverse impact on our business for an uncertain period of time. The impact of COVID-19 may also heighten other risks discussed in our Annual Report on Form 10-K, which could materially and adversely impact our business, consolidated financial statements and stock price.

### Risks Related to Our Business

***Our revenues are concentrated in the U.S. financial services and consumer credit industries. When these industries or the broader financial markets experience a downturn, demand for our services and revenues may be adversely affected.***

Our largest customers, and therefore our business and revenues, depend on favorable macroeconomic conditions and are impacted by the availability of credit, the level and volatility of interest rates, inflation, employment levels, consumer confidence and housing demand. In addition, a significant amount of our revenues are concentrated among certain customers, industries, product offerings and in distinct geographic regions, primarily in the United States. In 2020 and 2019, 52% and 49% of our consolidated gross revenues, respectively, were concentrated in our U.S. Markets Financial Services vertical and our Consumer Interactive segment. Our customer base suffers when financial markets experience volatility, liquidity issues and disruption, which has occurred in the past and which could reoccur, and the potential for increased and continuing disruptions going forward, present considerable risks to our business and revenue. Changes in the economy have resulted, and may continue to result, in fluctuations in volumes, pricing and operating margins for our services. If businesses in these industries experience economic hardship, we cannot assure you that we will be able to generate future revenue growth. In addition, if consumer demand for financial services and products and the number of credit applications decrease, the demand for our services could also be materially reduced. These types of disruptions could lead to a decline in the volumes of services we provide our customers and could negatively impact our revenue and results of operations.

***We are subject to significant competition in the markets in which we operate and we may face significant competition in the new markets that we plan to enter.***

The market for our services is highly competitive, and we may not be able to compete successfully against our competitors, which could impair our ability to sell our services. We compete on the basis of differentiated solutions, datasets, analytics capabilities, ease of integration with our customers' technology, stability of services, customer relationships, innovation and price. Our regional and global competitors vary in size, financial and technical capability, and in the scope of the products and services they offer. Some of our competitors may be better positioned to develop, promote and sell their products. Larger competitors may benefit from greater cost efficiencies and may be able to win business simply based on pricing. We consistently face downward pressure on the pricing of our products, which could result in reduced prices for certain products, or a loss of market share. Our competitors may also be able to respond to opportunities before we do, by taking advantage of new technologies, changes in customer requirements or market trends.

Our Consumer Interactive segment experiences competition from emerging companies. For example, prior to 2008, Equifax and Experian were our top competitors for direct-to-consumer credit services, such as credit reports and identity theft protection services. In the past several years, there has been an influx of other companies offering similar services, some of whom leverage the free services mandated by law to be provided by nationwide credit reporting agencies. These developments have resulted in increased competition.

Many of our competitors have extensive customer relationships, including relationships with our current and potential customers. New competitors, or alliances among competitors, may emerge and gain significant market share. Existing or new competitors may develop products and services that are superior to ours or that achieve greater market acceptance. If we are unable to respond to changes in customer requirements as quickly and effectively as our competition, our ability to expand our business and sell our services may be adversely affected.

Our competitors may be able to sell services at lower prices than us, individually or as part of integrated suites of several related services. This ability may cause our customers to purchase from our competitors rather than from us. Price reductions by our competitors could also negatively impact our operating margins or harm our ability to obtain new long-term contracts or renewals of existing contracts on favorable terms. Additionally, some of our customers may develop products of their own that replace the products they currently purchase from us, which would result in lower revenue.

We also expect that there will be significant competition in the new markets that we enter. We cannot assure you that we will be able to compete effectively against current and future competitors. If we fail to successfully compete, our business, financial condition and results of operations may be adversely affected.

***To the extent the availability of free or relatively inexpensive consumer information increases, the demand for some of our services may decrease.***

Public and commercial sources of free or relatively inexpensive consumer information have become increasingly available and this trend is expected to continue. Public and commercial sources of free or relatively inexpensive consumer information, including free credit information from lead generation companies and from banks, may reduce demand for our services. Beginning in April 2020, we began to offer free credit reports on a weekly basis. To the extent that our customers choose not to obtain services from us and instead rely on information obtained at little or no cost from these public and commercial sources, our business, financial condition and results of operations may be adversely affected.

***Our relationships with key long-term customers may be materially diminished or terminated.***

We have long-standing relationships with a number of our customers, many of whom could unilaterally terminate their relationship with us or materially reduce the amount of business they conduct with us at any time. Our customer agreements relating to our core credit reporting service offered through our U.S. Markets segment are terminable upon advance written notice (typically ranging from 30 days to six months) by either us or the customer, which provides our customers with the opportunity to renegotiate their contracts with us or to award more business to our competitors.

We also provide our services to business partners who may combine them with their own or other branded services to be offered as a bundle to consumers, governmental agencies and businesses in support of fraud or credit protection, credit monitoring, identity authentication, insurance or credit underwriting, and collections. Some of these partners are the largest providers of credit information or identity protection services to the U.S. consumer market.

Market competition, business requirements, financial condition and consolidation through mergers or acquisitions, could adversely affect our ability to continue or expand our relationships with our customers and business partners. There is no guarantee that we will be able to retain or renew existing agreements, maintain relationships with any of our customers or business partners on acceptable terms or at all, or collect amounts owed to us from insolvent customers or business partners. The loss of one or more of our major customers or business partners could adversely affect our business, financial condition and results of operations.

***If we are unable to develop successful new services in a timely manner, or if the market does not adopt our new services, our ability to maintain or increase our revenue could be adversely affected.***

In order to keep pace with customer demands for increasingly sophisticated service offerings, to sustain expansion into growth industries and to maintain our profitability, we must continue to innovate and introduce new services to the market. The process of developing new services is complex and uncertain. Our industry solutions require extensive experience and knowledge from within the relevant industry. We must commit significant resources to this effort before knowing whether the market will accept new service offerings. Additionally, our business strategy is dependent on our ability to expand into new markets and to bring new products to market. We may not successfully enter into new markets or execute on our new services because of challenges in planning or timing, technical hurdles, difficulty in predicting market demand, changes in regulation or a lack of appropriate resources. Additionally, even if we successfully develop new products, our existing customers might not accept these new products or new markets might not adopt our products due to operational constraints, high switching costs or general lack of market readiness. Failure to successfully introduce new services to the market could adversely affect our reputation, business, financial condition and results of operations.

***If our outside service providers and key vendors are not able to or do not fulfill their service obligations, our operations could be disrupted and our operating results could be harmed.***

We depend on a number of service providers and key vendors such as telecommunication companies, software engineers, data processors, software and hardware vendors and providers of credit score algorithms, who are critical to our operations. These service providers and vendors are involved with our service offerings, communications and networking equipment, computer hardware and software and related support and maintenance. Although we have implemented service-level agreements and have established monitoring controls, our operations could be disrupted if we do not successfully manage relationships with our service providers, if they do not perform or are unable to perform agreed-upon service levels, or if they are unwilling to make their services available to us at reasonable prices. If our service providers and vendors do not perform their service obligations, it could adversely affect our reputation, business, financial condition and results of operations.

***There may be further consolidation in our end-customer markets, which may adversely affect our revenues.***

There has been, and we expect there will continue to be, merger, acquisition and consolidation activity in our customer markets. If our customers merge with, or are acquired by, other entities that are not our customers, or that use fewer of our services, our revenue may be adversely impacted. In addition, industry consolidation could affect the base of recurring transaction-based revenue if consolidated customers combine their operations under one contract, since most of our contracts provide for volume discounts. In addition, our existing customers might leave certain geographic markets, which would no longer require them to purchase certain products from us and, consequently, we would generate less revenue than we currently expect.

**Risks Related to Technology and Cybersecurity**

***Data security and integrity are critically important to our business, and cybersecurity incidents, including cyberattacks, breaches of security, unauthorized access to or disclosure of confidential information, business disruption, or the perception that confidential information is not secure, could result in a material loss of business, regulatory enforcement, substantial legal liability and/or significant harm to our reputation.***

As a global consumer credit reporting agency and provider of risk and information solutions, we collect, store and transmit a large amount of sensitive and confidential consumer information on over one billion consumers, including financial information, personally identifiable information and protected health information. We operate in an environment of significant risk of cybersecurity incidents resulting from unintentional events or deliberate attacks by third parties or insiders, which may involve exploiting highly obscure security vulnerabilities or sophisticated attack methods. These cyberattacks can take many forms, but they typically have one or more of the following objectives, among others:

- obtain unauthorized access to confidential consumer information;
- manipulate or destroy data; or
- disrupt, sabotage or degrade service on our systems.

We experience numerous attempts to access our computer systems, software, networks, data and other technology assets on a daily basis, none of which has resulted in a material data incident or otherwise had any material impact on our business, operations or financial results.

The security and protection of non-public consumer information is a top priority for TransUnion. We devote significant resources to maintain and regularly upgrade the wide array of physical, technical, and contractual safeguards we employ to provide security around the collection, storage, use, access and delivery of information we have in our possession. We cannot assure you that our systems, databases and services will not be compromised or disrupted in the future, whether as a result of deliberate attacks by malicious actors, breaches due to employee error or malfeasance, or other disruptions during the process of upgrading or replacing computer software or hardware, power outages, computer viruses, telecommunication or utility failures or natural disasters or other catastrophic events. We work to monitor and develop our information technology networks and infrastructure to prevent, detect, address and mitigate the risk of unauthorized access, misuse, computer viruses and other events that could have a security impact.

Further, it is possible that we may acquire a company that has experienced a security incident that the acquired company has yet to discover, investigate and remediate. It is possible that neither the acquired company nor TransUnion may identify the issue in a timely manner and the event could spread more broadly to other parts of TransUnion during the integration effort.

Highly publicized cybersecurity incidents, including the data incident announced by Equifax on September 7, 2017, and more recently, the December 13, 2020 announcement by SolarWinds that its software supply chain was compromised, have heightened consumer, legislative and regulatory awareness of cybersecurity risks. These events continue to embolden individuals or groups to target our systems more aggressively.

The preventive actions we take to address cybersecurity risk, including protection of our systems and networks, may be insufficient to repel or mitigate the effects of cyberattacks in the future as it may not always be possible to anticipate, detect or recognize threats to our systems, or to implement effective preventive measures against all cybersecurity risks. This is because, among other things:

- the techniques used in cyberattacks change frequently and may not be recognized until after the attacks have succeeded;
- cyberattacks can originate from a wide variety of sources, including sophisticated threat actors involved in organized crime, sponsored by nation-states, or linked to terrorist or hacktivist organizations; and
- third parties may seek to gain access to our systems either directly or using equipment or security passwords belonging to employees, customers, third-party service providers or other users.

Unauthorized disclosure, loss or corruption of our data or inability of our customers to access our systems could disrupt our operations, subject us to substantial regulatory and legal proceedings and potential liability, result in a material loss of business and/or significantly harm our reputation.

We may not be able to immediately address the consequences of a cybersecurity incident because a successful breach of our computer systems, software, networks or other technology assets could occur and persist for an extended period of time before being detected due to, among other things:

- the breadth and complexity of our operations and the high volume of transactions that we process;
- the large number of customers, counterparties and third-party service providers with which we do business;
- the proliferation and increasing sophistication of cyberattacks;
- the possibility that a malicious third party compromises the software, hardware or services that we procure from a service provider unbeknownst to both the provider and to TransUnion; and
- the possibility that a third party, after establishing a foothold on an internal network without being detected, might obtain access to other networks and systems.

The extent of a particular cybersecurity incident and the steps that we may need to take to investigate it may not be immediately clear, and it may take a significant amount of time before such an investigation can be completed and full and reliable information about the incident is known. While such an investigation is ongoing, we may not necessarily know the extent of the harm or how best to remediate it, and certain errors or actions could be repeated or compounded before they are discovered and remediated, any or all of which could further increase the costs and consequences of a cybersecurity incident.

Due to concerns about data security and integrity, a growing number of legislative and regulatory bodies have adopted consumer notification and other requirements in the event that consumer information is accessed by unauthorized persons and additional regulations regarding the use, access, accuracy and security of such data are possible. In the United States, we are subject to federal and state laws that provide for more than 50 disparate notification regimes. In the event of unauthorized access, our failure to comply with the complexities of these various regulations could subject us to regulatory scrutiny and additional liability.

***We may be unable to adequately anticipate, prevent or mitigate damage resulting from increasingly sophisticated methods of illegal or fraudulent activities committed against us, which could harm our business, financial condition and results of operations and could significantly harm our reputation.***

The defensive measures that we take to manage threats, especially cyber-related threats, to our business may not adequately anticipate, prevent or mitigate harm we may suffer from such threats. Criminals use evolving and increasingly sophisticated methods of perpetrating illegal and fraudulent activities. For example, during the first week of September 2020, TransUnion experienced a series of Distributed Denial of Service (DDoS) attacks. While these attacks did not result in any unauthorized access to data or systems, there was disruption to TransUnion's normal operations including degraded customer response time, intermittent timeouts and degraded internal information technology services utilized by TransUnion associates. TransUnion deploys a number of defensive measures to mitigate DDoS attacks, but persistent attackers can challenge these protections.

Also, in July 2019 TransUnion Limited, a Hong Kong entity in which the Company holds a 56.25 percent interest, was the victim of criminal fraud involving employee impersonation and fraudulent requests that successfully targeted TransUnion Limited, which resulted in a series of fraudulently induced wire transfers totaling $17.8 million for which we recorded one-time pre-tax charge plus $3.0 million of administrative expense, for a total of $20.8 million, $17.3 million net of tax, in net income in 2019 ($10.0 million in net income attributable to TransUnion). Fraudulent activities committed against us could disrupt our operations, have an adverse effect on our financial results, subject us to substantial legal proceedings and potential liability, result in a material loss of business and/or significantly harm our reputation.

***If we experience system failures, personnel disruptions or capacity constraints, or our customers do not modify their systems to accept new releases of our distribution programs, the delivery of our services to our customers could be delayed or interrupted, which could harm our business and reputation and result in the loss of revenues or customers.***

Our ability to provide reliable service largely depends on our ability to maintain the efficient and uninterrupted operation of our computer network, systems and data centers, some of which have been outsourced to third-party providers. In addition, we generate a significant amount of our revenues through channels that are dependent on links to telecommunications providers. Our systems, personnel and operations could be exposed to damage or interruption from fire, natural disasters, pandemic illness, power loss, war, terrorist acts, civil disobedience, telecommunication failures, computer viruses, DDoS attacks or human error. We may not have sufficient redundant operations to cover a loss or failure of our systems in a timely manner. Any significant interruption could severely harm our business and reputation and result in a loss of revenue and customers. Additionally, from time to time we send our customers new releases of our distribution programs, some of which contain security updates. Any failure by our customers to install these new releases could expose our customers to computer security risks.

***We could lose our access to data sources which could prevent us from providing our services.***

Our services and products depend extensively upon continued access to and receipt of data from external sources, including data received from customers, strategic partners and various government and public records repositories. In some cases, we compete with our data providers. Our data providers could stop providing data, provide untimely data or increase the costs for their data for a variety of reasons, including a perception that our systems are insecure as a result of a data security incidents, budgetary constraints, a desire to generate additional revenue or for regulatory or competitive reasons. We could also become subject to increased legislative, regulatory or judicial restrictions or mandates on the collection, disclosure or use of such data, in particular if such data is not collected by our providers in a way that allows us to legally use the data. If we were to lose access to this external data or if our access or use were restricted or were to become less economical or desirable, our ability to provide services could be negatively impacted, which would adversely affect our reputation, business, financial condition and results of operations. We cannot provide assurance that we will be successful in maintaining our relationships with these external data source providers or that we will be able to continue to obtain data from them on acceptable terms or at all. Furthermore, we cannot provide assurance that we will be able to obtain data from alternative sources if our current sources become unavailable.

***If we fail to maintain and improve our systems, our data matching technology, and our interfaces with data sources and customers, demand for our services could be adversely affected.***

In our markets, there are continuous improvements in computer hardware, network operating systems, programming tools, programming languages, operating systems, data matching, data filtering and other database technologies and the use of the internet. These improvements, as well as changes in customer preferences or regulatory requirements, may require changes in the technology used to gather and process our data and deliver our services. Our future success will depend, in part, upon our ability to:

- internally develop and implement new and competitive technologies;
- use leading third-party technologies effectively;
- respond to changing customer needs and regulatory requirements, including being able to bring our new products to the market quickly; and
- transition customers and data sources successfully to new interfaces or other technologies.

We cannot provide assurance that we will successfully implement new technologies, cause customers or data furnishers to implement compatible technologies or adapt our technology to evolving customer, regulatory and competitive requirements. If we fail to respond, or fail to cause our customers or data furnishers to respond, to changes in technology, regulatory requirements or customer preferences, the demand for our services, the delivery of our services or our market reputation could be adversely affected. Additionally, our failure to implement important updates could affect our ability to successfully meet the timeline for us to generate cost savings resulting from our investments in improved technology. Failure to achieve any of these objectives would impede our ability to deliver strong financial results.

**Risks Related to Laws, Regulations and Government Oversight**

***Our business is subject to various governmental regulations, laws and orders, compliance with which may cause us to incur significant expenses or reduce the availability or effectiveness of our solutions, and the failure to comply with which could subject us to civil or criminal penalties or other liabilities.***

Our businesses are subject to regulation under the FCRA, the GLBA, the DPPA, HIPAA, HITECH, the Dodd-Frank Act, the FTC Act and various other international, federal, state and local laws and regulations. See “Business-Legal and Regulatory Matters” for a description of select regulatory regimes to which we are subject. These laws and regulations, which generally are designed to protect the privacy of the public and to prevent the misuse of personal information available in the marketplace, are complex, change frequently and have tended to become more stringent over time. We already incur significant expenses in our attempt to ensure compliance with these laws.

Currently, public concern is high with regard to the operation of credit reporting agencies in the United States, as well as the collection, use, accuracy, correction and sharing of personal information, including Social Security numbers, dates of birth, financial information, medical information, department of motor vehicle data and other behavioral data. In addition, many consumer advocates, privacy advocates, legislatures and government regulators believe that existing laws and regulations do not adequately protect privacy and have become increasingly concerned with the collection and use of this type of personal information. As a result, several U.S. states have recently introduced and passed legislation to expand data security breach notification rules and to mirror some of the protections provided by the General Data Protection Regulation (“GDPR”) in the European Union and the U.K. These state laws are intended to provide consumers with greater transparency and control over their personal data. For example, CCPA, which became effective on January 1, 2020, applies to certain businesses that collect personal information from California residents and establishes several consumer rights, including a right to know what personal information is being collected about them and whether and to whom it is sold, a right to access their personal information and have it deleted, a right to opt out of the sale of their personal information, and a right to equal service and price regardless of exercise of these rights. While the CCPA includes specific exemptions for practices and activities regulated by GLBA or FCRA, including our credit reporting and financial services business lines, it requires, among other things, new disclosures to California consumers, impose new rules for collecting or using information about minors, and afford consumers new abilities to opt out of certain disclosures of personal information in other portions of our business that are not regulated by GLBA or FCRA. On November 3, 2020, California adopted the California Privacy Rights Act (the "CPRA"), which amends and expands CCPA. It is anticipated that most of the substantive provisions of CPRA will go into effect in 2023.

The data incident announced by Equifax on September 7, 2017, resulted in significantly increased legislative and regulatory activity at the federal and state levels as lawmakers and regulators continue to propose a wide range of further restrictions on the collection, dissemination or commercial use of personal information, information security standards, data security incident disclosure standards and requirements to provide certain of our services to consumers free of charge. This and additional legislative or regulatory efforts in the United States, or action by Executive Order of the President of the United States, could further regulate credit reporting agencies and the collection, use, communication, access, accuracy, obsolescence, sharing, correction and security of this personal information. Similar initiatives are underway in various other countries in which we do business. In addition, any perception that our practices or products are an invasion of privacy, whether or not consistent with current or future regulations and industry practices, may subject us to public criticism, private class actions, reputational harm, governmental intervention, or claims by regulators, which could disrupt our business and expose us to increased liability.

Public concern regarding identity theft also has led to more transparency for consumers as to what is in their credit reports. We provide credit reports and scores and monitoring services to consumers for a fee, and this income stream could be reduced or restricted by legislation that requires us to provide these services to consumers free of charge. For example, under U.S. federal law today, we are required to provide consumers with one credit report per year free of charge, and beginning in April 2020, we have begun to offer consumers free weekly credit reports.

The following legal and regulatory developments also could have a material adverse effect on our business, financial condition or results of operations:

- amendment, enactment or interpretation of laws and regulations that restrict the access and use of personal information and reduce the availability or effectiveness of our solutions or the supply of data available to customers;
- changes in governmental, cultural and consumer attitudes in favor of further restrictions on information collection and sharing, which may lead to regulations that prevent full utilization of our solutions;
- failure of data suppliers or customers to comply with laws or regulations, where mutual compliance is required;
- failure of our solutions to comply with current laws and regulations; and
- failure of our solutions to adapt to changes in the regulatory environment in an efficient, cost-effective manner.

Changes in applicable legislation or regulations that restrict or dictate how we collect, maintain, combine and disseminate information, or that require us to provide services to consumers or a segment of consumers without charge, could adversely affect our business, financial condition or results of operations. In the future, we may be subject to significant additional expense to ensure continued compliance with applicable laws and regulations and to investigate, defend or remedy actual or alleged violations. Any failure by us to comply with applicable laws or regulations could also result in significant liability to us, including liability to private plaintiffs as a result of individual or class action litigation, or may result in the cessation of our operations or portions of our operations or impositions of fines and restrictions on our ability to carry on or expand our operations. Moreover, our compliance with privacy laws and regulations and our reputation depend in part on our customers' adherence to privacy laws and regulations and their use of our services in ways consistent with consumer expectations and regulatory requirements. Certain of the laws and regulations governing our business are subject to interpretation by judges, juries and administrative entities, creating substantial uncertainty for our business. We cannot predict what effect the interpretation of existing or new laws or regulations may have on our business. See "Business-Legal and Regulatory Matters."

***The Consumer Financial Protection Bureau has supervisory and examination authority over our business and may initiate enforcement actions with regard to our compliance with federal consumer financial laws.***

The CFPB, which was established under the Dodd-Frank Act and commenced operations in July 2011, has broad authority over our business. This includes authority to issue regulations under federal consumer financial protection laws, such as under FCRA and other laws applicable to us and our financial customers. The CFPB is authorized to prevent "unfair, deceptive or abusive acts or practices" through its regulatory, supervisory and enforcement authority.

In 2012, credit reporting companies like us became subject to a federal supervision program for the first time under the CFPB's authority to supervise and examine certain non-depository institutions that are "larger participants" of the consumer credit reporting market. The CFPB conducts examinations and investigations, and may issue subpoenas and bring civil actions in federal court for violations of the federal consumer financial laws including FCRA. In these proceedings, the CFPB can seek relief that includes: rescission or reformation of contracts, restitution, disgorgement of profits, payment of damages, limits on activities and civil money penalties of up to $1.0 million per day for knowing violations. The CFPB conducts periodic examinations of us and the consumer credit reporting industry, which could result in new regulations or enforcement actions or proceedings. Actions by the CFPB could result in requirements to alter or cease offering affected products and services, making them less attractive and restricting our ability to offer them. For example, in December 2016, as part of an agreed settlement with the CFPB, we agreed among other things, to implement certain agreed practice changes in the way we advertise, market and sell products and services offered directly to consumers.

Although we have committed resources to enhancing our compliance programs, actions by the CFPB or other regulators against us could result in reputational harm. Our compliance costs and legal and regulatory exposure could increase materially if the CFPB or other regulators enact new regulations, change regulations that were previously adopted, modify through supervision or enforcement past regulatory guidance, or interpret existing regulations in a manner different or stricter than have been previously interpreted.

***Regulatory oversight of our contractual relationships with certain of our customers may adversely affect our business.***

The Office of the Comptroller of the Currency's (the "OCC") guidance to national banks and federal savings associations on assessing and managing risks associated with third-party relationships, which include all business arrangements between a bank and another entity, by contract or otherwise, requires banks to exercise comprehensive oversight throughout each phase of a bank's business arrangement with third-party service providers, and instructs banks to adopt risk management processes commensurate with the level of risk and complexity of its third-party relationships. The OCC expects especially rigorous oversight of third-party relationships that involve certain "critical activities." In light of this guidance, our existing or potential financial services customers subject to OCC regulation may continue to revise their third-party risk management policies and processes and the terms on which they do business with us, which may adversely affect our relationship with such customers.

***The outcome of litigation, inquiries, investigations, examinations or other legal proceedings in which we are involved, in which we may become involved, or in which our customers or competitors are involved could subject us to significant monetary damages or restrictions on our ability to do business.***

Legal proceedings arise frequently as part of the normal course of our business. These may include individual consumer cases, class action lawsuits and inquiries, investigations, examinations, regulatory proceedings or other actions brought by federal (e.g., the CFPB and the FTC) or state authorities or by consumers. The scope and outcome of these proceedings is often difficult to assess or quantify. Plaintiffs in lawsuits may seek recovery of large amounts and the cost to defend such litigation may be significant. There may also be adverse publicity and uncertainty associated with investigations, litigation and orders (whether pertaining to us, our customers or our competitors) that could decrease customer acceptance of our services or result in material discovery expenses. In addition, a court-ordered injunction or an administrative cease-and-desist order or settlement may require us to modify our business practices or may prohibit conduct that would otherwise be legal and in which our competitors may engage. Many of the technical and complex statutes to which we are subject, including state and federal credit reporting, medical privacy and financial privacy requirements, may provide for civil and criminal penalties and may permit consumers to maintain individual or class action lawsuits against us and obtain statutorily prescribed damages. Additionally, our customers might face similar proceedings, actions or inquiries, which could affect their business and, in turn, our ability to do business with those customers. While we do not believe that the outcome of any pending or threatened legal proceeding, investigation, examination or supervisory activity will have a material adverse effect on our financial position, such events are inherently uncertain and adverse outcomes could result in significant monetary damages, penalties or injunctive relief against us.

See “FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA—Notes to Consolidated Financial Statements,” Note 20, “Contingencies” for information regarding our legal proceedings.

### Risks Related to Intellectual Property

***We may be unable to protect our intellectual property adequately or cost-effectively, which may cause us to lose market share or force us to reduce our prices. We also rely on trade secrets and other forms of unpatented intellectual property that may be difficult to protect.***

Our success depends, in part, on our ability to protect and preserve the proprietary aspects of our technology and services. If we are unable to protect our intellectual property, including trade secrets and other unpatented intellectual property, our competitors could use our intellectual property to market and deliver similar services, decreasing the demand for our services. We rely on the patent, copyright, trademark, trade secret and other intellectual property laws of the United States and other countries, as well as contractual restrictions, such as nondisclosure agreements, to protect and control access to our proprietary intellectual property. These measures afford limited protection, however, and may be inadequate. We may be unable to prevent third parties from using our proprietary assets without our authorization or from breaching any contractual restrictions with us. Enforcing our rights could be costly, time-consuming, distracting and harmful to significant business relationships. Claims that a third party illegally obtained and is using trade secrets can be difficult to prove, and courts outside the United States may be less willing to protect trade secrets. Additionally, others may independently develop non-infringing technologies that are similar or superior to ours. Any significant failure or inability to adequately protect and control our proprietary assets may harm our business and reduce our ability to compete.

***We may face claims for intellectual property infringement, which could subject us to monetary damages or limit us in using some of our technologies or providing certain services.***

There has been substantial litigation in the United States regarding intellectual property rights in the information technology industry. We cannot be certain that we do not infringe on the intellectual property rights of third parties, including the intellectual property rights of third parties in other countries, which could result in a liability to us. Historically, patent applications in the United States and some foreign countries have not been publicly disclosed until eighteen months following submission of the patent application, and we may not be aware of currently filed patent applications that relate to our products or processes. If patents are later issued on these applications, we may be liable for infringement. In the event that claims are asserted against us, we may be required to obtain licenses from third parties (if available on acceptable terms or at all). Any such claims, regardless of merit, could be time consuming and expensive to litigate or settle, divert the attention of management and materially disrupt the conduct of our business, and we may not prevail. Intellectual property infringement claims against us could subject us to liability for damages and restrict us from providing services or require changes to certain products or services. Although our policy is to obtain licenses or other rights where necessary, we cannot provide assurance that we have obtained all required licenses or rights. If a successful claim of infringement is brought against us and we fail to develop non-infringing products or services, or to obtain licenses on a timely and cost-effective basis, our reputation, business, financial condition and results of operations could be adversely affected.

**Risks Related to Global Operations**

***Our ability to expand our operations in, and the portion of our revenue derived from, markets outside the United States is subject to economic, political and other inherent risks, which could adversely impact our growth rate and financial performance.***

Over the last several years, we have derived a growing portion of our revenues from customers outside the United States, and it is our intent to continue to expand our international operations. We have sales and technical support personnel in numerous countries worldwide. We expect to continue to add personnel internationally to expand our abilities to deliver differentiated services to our international customers. Expansion into international markets will require significant resources and management attention and will subject us to new regulatory, economic and political risks. Moreover, the services we offer in developed and emerging markets must match our customers' demand for those services. Due to price, limited purchasing power and differences in the development of consumer credit markets, there can be no assurance that our services will be accepted in any particular developed or emerging market, and we cannot be sure that our international expansion efforts will be successful. The results of our operations and our growth rate could be adversely affected by a variety of factors arising out of international commerce, some of which are beyond our control. These factors include:

- currency exchange rate fluctuations;
- foreign exchange controls that might prevent us from repatriating cash to the United States;
- difficulties in managing and staffing international offices;
- increased travel, infrastructure, legal and compliance costs of multiple international locations;
- foreign laws and regulatory requirements;
- terrorist activity, natural disasters and other catastrophic events;
- restrictions on the import and export of technologies;
- difficulties in enforcing contracts and collecting accounts receivable;
- longer payment cycles;
- failure to meet quality standards for outsourced work;
- unfavorable tax rules;
- political and economic conditions in foreign countries, particularly in emerging markets;
- the presence and acceptance of varying level of business corruption in international markets;
- varying business practices in foreign countries; and
- reduced protection for intellectual property rights.

For example, in 2020, revenue from our International segment decreased 3.5% due to the impact of weakening foreign currencies, and in 2019, the revenue from our International segment decreased 4.8% due to the impact of weakening foreign currencies. See "Management's Discussion and Analysis of Financial Condition and Results of Operations-Twelve Months Ended December 31, 2020, 2019 and 2018-Revenue-International Segment." As we continue to expand our business, our success will partially depend on our ability to anticipate and effectively manage these and other risks. Our failure to manage these risks could adversely affect our business, financial condition and results of operations.

### Risks Related to Our Growth Strategy

***We depend, in part, on strategic alliances, joint ventures and acquisitions to grow our business. If we are unable to make strategic acquisitions and develop and maintain these strategic alliances and joint ventures, our growth may be adversely affected.***

An important focus of our business is to identify business partners who can enhance our services and enable us to develop solutions that differentiate us from our competitors. We have entered into several alliance agreements or license agreements with respect to certain of our datasets and services and may enter into similar agreements in the future. These arrangements may require us to restrict our use of certain of our technologies among certain customer industries, or to grant licenses on terms that ultimately may prove to be unfavorable to us, either of which could adversely affect our business, financial condition or results of operations. Relationships with our alliance agreement partners may include risks due to incomplete information regarding the marketplace and commercial strategies of our partners, and our alliance agreements or other licensing agreements may be the subject of contractual disputes. If we or our alliance agreements' partners are not successful in maintaining or commercializing the alliance agreements' services, such commercial failure could adversely affect our business.

In addition, a significant strategy for our international expansion is to establish operations through strategic alliances or joint ventures with local financial institutions and other partners. We cannot provide assurance that these arrangements will be successful or that our relationships with our partners will continue to be mutually beneficial. If these relationships cannot be established or maintained, it could negatively impact our business, financial condition and results of operations. Moreover, our ownership in and control of our foreign investments may be limited by local law.

We also selectively evaluate and consider acquisitions as a means of expanding our business and entering into new markets. We may not be able to acquire businesses we target due to a variety of factors such as competition from companies that are better positioned to make the acquisition. Our inability to make such strategic acquisitions could restrict our ability to expand our business and enter into new markets which would limit our ability to generate future revenue growth. Additionally, given some of our equity interests in various companies, we may be limited in our ability to require or influence such companies to make acquisitions or take other actions that we believe to be in our or their best interests. Our inability to take such actions could have a material impact on our revenues or earnings.

***When we engage in acquisitions, investments in new businesses or divestitures of existing businesses, we will face risks that may adversely affect our business.***

We may acquire or make investments in businesses that offer complementary services and technologies. Acquisitions may not be completed on favorable terms and acquired assets, data or businesses may not be successfully integrated into our operations. Any acquisitions or investments will include risks commonly encountered in acquisitions of businesses, including:

- failing to achieve the financial and strategic goals for the acquired business;
- paying more than fair market value for an acquired company or assets;
- failing to integrate the operations and personnel of the acquired businesses in an efficient and timely manner;

- disrupting our ongoing businesses;
- distracting management focus from our existing businesses;
- acquiring unanticipated liabilities;
- failing to retain key personnel;
- incurring the expense of an impairment of assets due to the failure to realize expected benefits;
- damaging relationships with employees, customers or strategic partners;
- diluting the share value of existing stockholders; and
- incurring additional debt or reducing available cash to service our existing debt.

Any divestitures will be accompanied by the risks commonly encountered in the sale of businesses, which may include:

- disrupting our ongoing businesses;
- reducing our revenues;
- losing key personnel;
- distracting management focus from our existing businesses;
- indemnification claims for breaches of representations and warranties in sale agreements;
- damaging relationships with employees and customers as a result of transferring a business to new owners; and
- failure to close a transaction due to conditions such as financing or regulatory approvals not being satisfied.

These risks could harm our business, financial condition or results of operations, particularly if they occur in the context of a significant acquisition or divestiture. Acquisitions of businesses having a significant presence outside the United States will increase our exposure to the risks of conducting operations in international markets.

### Risks Related to Our Indebtedness

***We have a substantial amount of debt which could adversely affect our financial position and prevent us from fulfilling our obligations under the debt instruments.***

As of December 31, 2020, the book value of our debt was approximately $3.454 billion consisting of outstanding borrowings under Trans Union LLC's senior secured credit facility. We may also incur significant additional indebtedness in the future. Our substantial indebtedness may:

- make it difficult for us to satisfy our financial obligations, including with respect to our indebtedness;
- limit our ability to borrow additional funds for working capital, capital expenditures, acquisitions or other general business purposes;
- limit our ability to use our cash flow or obtain additional financing for future working capital, capital expenditures, acquisitions or other general business purposes;
- require us to use a substantial portion of our cash flow from operations to make debt service payments;
- expose us to the risk of increased interest rates as certain of our borrowings, including Trans Union LLC's senior secured credit facility, are at variable rates of interest;

- limit our ability to pay dividends;
- limit our flexibility to plan for, or react to, changes in our business and industry;
- place us at a competitive disadvantage compared with our less-leveraged competitors; and
- increase our vulnerability to the impact of adverse economic and industry conditions.

In addition, the credit agreement governing Trans Union LLC's senior secured credit facility contains restrictive covenants that may limit our ability to engage in activities that may be in our long-term best interest. Our failure to comply with those covenants could result in an event of default which, if not cured or waived, could result in the acceleration of substantially all of our debt.

***Despite our current level of indebtedness, we may still be able to incur additional indebtedness. This could further the risks associated with our substantial indebtedness.***

We and our subsidiaries may be able to incur substantial additional indebtedness in the future. The terms of the credit agreement governing our debt limit, but do not prohibit, us or our subsidiaries from incurring additional indebtedness, and the additional indebtedness incurred in compliance with these restrictions could be substantial. If we incur any additional debt, the priority of that debt may impact the ability of existing debt holders to share ratably in any proceeds distributed in connection with any insolvency, liquidation, reorganization, dissolution or other winding-up of us, subject to collateral arrangements. These restrictions will also not prevent us from incurring obligations that do not constitute indebtedness. We also have the ability to request incremental loans on the same terms under the existing senior secured credit facility up the greater of $1.0 billion and 100% of consolidated EBITDA, and may incur additional incremental loans so long as the senior secured net leverage ratio does not exceed 4.25 to 1.0, subject to certain additional conditions and commitments by existing or new lenders to fund any additional borrowings. If new indebtedness is added to our current debt levels, the related risks that we and our subsidiaries now face could intensify.

***We may not be able to generate sufficient cash to service all of our indebtedness, and may be forced to take other actions to satisfy our obligations under our indebtedness, which may not be successful.***

Our ability to make scheduled payments due on our debt obligations or to refinance our debt obligations depends on our financial condition and operating performance, which are subject to prevailing economic, industry and competitive conditions and to certain financial, business, legislative, regulatory and other factors beyond our control as discussed above. Our total scheduled principal repayments of debt made in 2020 and 2019 were $58.8 million and $49.0 million, respectively. Our total interest expense for 2020 and 2019 was $126.3 million and $173.6 million, respectively. We may be unable to maintain a level of cash flow from operating activities sufficient to permit us to pay the principal, premium, if any, and interest on our indebtedness.

If our cash flow and capital resources are insufficient to fund our debt service obligations, we could face substantial liquidity problems and could be forced to reduce or delay investments and capital expenditures or to dispose of material assets or operations, seek additional debt or equity capital or restructure or refinance our indebtedness. We may not be able to implement any such alternative measures on commercially reasonable terms or at all and, even if successful, those alternative actions may not allow us to meet our scheduled debt service obligations. The credit agreement governing Trans Union LLC's senior secured credit facility restricts our ability to dispose of assets and use the proceeds from those dispositions and may also restrict our ability to raise debt or equity capital to be used to repay other indebtedness when it becomes due. We may not be able to consummate those dispositions or to obtain proceeds in an amount sufficient to meet any debt service obligations then due. In addition, under the covenants of the credit agreement governing our senior secured credit facility, TransUnion Intermediate is restricted from making certain payments, including dividend payments to TransUnion, subject to certain exceptions.

***Our inability to generate sufficient cash flow to satisfy our debt obligations, or to refinance our indebtedness on commercially reasonable terms or at all, would materially and adversely affect our financial position and results of operations and our ability to satisfy our obligations.***

If we cannot make our scheduled debt payments, we will be in default and all outstanding principal and interest on our debt may be declared due and payable, the lenders under Trans Union LLC's senior secured credit facility could terminate their commitments to loan money, Trans Union LLC's secured lenders (including the lenders under Trans Union LLC's senior secured credit facility) could foreclose against the assets securing their borrowings and we could be forced into bankruptcy or liquidation.

***The expected LIBOR phase-out may have unpredictable impacts on contractual mechanics in the credit markets or the broader financial markets, which could have an adverse effect on our results of operations.***

The United Kingdom Financial Conduct Authority, which regulates LIBOR, intends to cease encouraging or requiring banks to submit rates for the calculation of most LIBOR tenors after June 2023 and is discouraging the use of LIBOR as a benchmark in new contracts after December, 2021. It is unclear whether LIBOR will cease to exist after June 2023 and there is currently no global consensus on what rate or rates will become acceptable alternatives. In the United States, the U.S. Federal Reserve Board-led industry group, the Alternative Reference Rates Committee, selected the Secured Overnight Financing Rate ("SOFR") as an alternative to LIBOR for U.S. dollar-denominated LIBOR-benchmarked obligations. SOFR is a broad measure of the cost of borrowing cash in the overnight United States treasury repo market, and the Federal Reserve Bank of New York has published the daily rate since 2018. Nevertheless, because SOFR is a fully secured overnight rate and LIBOR is a forward-looking unsecured rate, SOFR is likely to be lower than LIBOR on most dates, and any spread adjustment applied by market participants to alleviate any mismatch during a transition period will be subject to methodology that remains undefined. Additionally, master agreements or other contracts drafted before consensus is reached on a variety of details related to a transition may not reflect provisions necessary to address it once LIBOR is fully phased out. Essentially all of our outstanding debt is variable-rate debt, including some based on LIBOR, though we have entered into interest rate swap agreements and cap agreements to limit our LIBOR exposure. The discontinuation of LIBOR and the transition from LIBOR to SOFR or other benchmark rates could have an unpredictable impact on contractual mechanics in the credit markets or result in disruption to the broader financial markets, including causing interest rates under our current or future agreements to perform differently than in the past, which could have an adverse effect on our results of operations.

**Risks Related to Ownership of Our Common Stock**

***Our stock price has been and may continue to be volatile or may decline regardless of our operating performance, and you may not be able to resell shares of our common stock at or above the price you paid or at all.***

The trading price of our common stock has been and may continue to be volatile. The stock market routinely experiences price and volume fluctuations that are often unrelated or disproportionate to the operating performance of the underlying businesses. This market volatility, as well as general economic, market or political conditions, could adversely affect the market price of our common stock, regardless of our actual operating performance, and you may not be able to resell your shares at or above the price you paid. In addition to the risks described in this section, several factors that could cause the price of our common stock to fluctuate significantly include, among others, the following, most of which we cannot control:

- quarterly variations in our operating results compared to market expectations;
- guidance that we provide to the public, any changes in this guidance or our failure to meet this guidance;
- changes in preferences of our customers;
- announcements of new products or significant price reductions by us or our competitors;

- size of our public float;
- stock price performance of our competitors;
- publication of research reports about our industry;
- changes in market valuations of our competitors;
- fluctuations in stock market prices and volumes;
- default on our indebtedness;
- actions by our competitors;
- changes in senior management or key personnel;
- changes in financial estimates by securities analysts;
- negative earnings or other announcements by us or other credit reporting agencies;
- downgrades in our credit ratings or the credit ratings of our competitors;
- issuances of capital stock or future sales of our common stock or other securities;
- investor perceptions or the investment opportunity associated with our common stock relative to other investment alternatives;
- the public response to press releases or other public announcements by us or third parties, including our filings with the SEC;
- announcements relating to litigation;
- the sustainability of an active trading market for our stock;
- changes in accounting principles;
- global economic, legal and regulatory factors unrelated to our performance; and
- other events or factors, including those resulting from natural disasters, war, acts of terrorism or responses to these events.

In addition, price volatility may be greater if the public float and trading volume of our common stock is low, and the amount of public float on any given day can vary depending on whether our stockholders choose to hold their shares for the long term.

In the past, following periods of market volatility, stockholders have instituted securities class action litigation against other issuers. If we were involved in securities litigation, it could have a substantial cost and divert resources and the attention of executive management from our business regardless of the outcome of such litigation.

***Anti-takeover provisions in our organizational documents might discourage, delay or prevent acquisition attempts for us that you might consider favorable.***

Certain provisions of our amended and restated certificate of incorporation ("Charter") and amended and restated bylaws may have an anti-takeover effect and may delay, defer or prevent a merger, acquisition, tender offer, takeover attempt or other change of control transaction that a stockholder might consider in its best interest, including those attempts that might result in a premium over the market price for the shares held by our stockholders.

These provisions provide for, among other things:

- the ability of our board of directors to issue one or more series of preferred stock;

- advance notice for nominations of directors by stockholders and for stockholders to include matters to be considered at our annual meetings;
- certain limitations on convening special stockholder meetings; and
- the removal of directors only for cause until our 2022 Annual Meeting of Stockholders.

At our 2020 Annual Meeting of Stockholders, our stockholders approved the phased declassification of our board of directors such that all directors will stand for election on an annual basis beginning with the 2022 Annual Meeting of Stockholders. The ability to remove a director with or without cause will be implemented when the board of directors is fully declassified in 2022.

The anti-takeover provisions discussed above could make it more difficult for a third party to acquire us, even if the third party's offer may be considered beneficial by many of our stockholders. As a result, our stockholders may be limited in their ability to obtain a premium for their shares.

***Our ability to pay cash dividends may be limited by the terms of our secured credit facility.***

On February 13, 2018, we announced that our board of directors approved a dividend policy pursuant to which we intend to pay quarterly cash dividends on our common stock. The terms of our senior secured credit facility impose certain limitations on our ability to pay dividends. We may, however, declare and pay cash dividends up to an unlimited amount unless a default or event of default exists under the senior secured credit facility. Any determination to pay dividends in the future will be at the discretion of our board of directors and will depend upon results of operations, financial condition, contractual restrictions, restrictions imposed by applicable law and other factors our board of directors deems relevant.

### General Risks

***We may not be able to attract and retain the skilled employees that we need to support our business.***

Our success depends on our ability to attract and retain experienced management, sales, research and development, analytics, marketing and technical support personnel. If any of our key personnel were unable or unwilling to continue in their present positions, it may be difficult to replace them and our business could be seriously harmed. If we are unable to find qualified successors to fill key positions as needed, our business could be seriously harmed. The complexity of our services requires trained customer service and technical support personnel. We may not be able to hire and retain such qualified personnel at compensation levels consistent with our compensation structure. Some of our competitors may be able to offer more attractive terms of employment. In addition, we invest significant time and expense in training our employees, which increases their value to competitors who may seek to recruit them. If we fail to retain our employees, we could incur significant expense replacing employees and our ability to provide quality services could diminish, resulting in a material adverse effect on our business.

***We are subject to losses from risks for which we do not insure.***

For certain risks, we do not maintain insurance coverage because of cost and/or availability. Because we retain some portion of insurable risks, and in some cases retain our risk of loss completely, unforeseen or catastrophic losses in excess of insured limits could materially adversely affect our business, financial condition and results of operations.

***If we fail to implement and maintain proper and effective internal controls over financial reporting, our ability to produce accurate financial statements on a timely basis could be impaired, which could cause investors to lose confidence in our reported financial information and have a negative effect on our stock price.***

Ensuring that we have adequate internal financial and accounting controls and procedures in place to produce accurate financial statements on a timely basis is a costly and time-consuming effort that needs to be reevaluated frequently. Our management is responsible for establishing and maintaining adequate internal control over financial reporting to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud, if any, within our company will have been detected. Effective internal controls are necessary for us to produce reliable financial reports and are important to prevent fraud. In July, 2019, we identified a material weakness in our internal control over financial reporting that we remediated as of December 31, 2019. See Part II, Item 9A "Controls and Procedures." Any failure to maintain or implement new or improved controls over financial reporting could result in additional material weaknesses or result in the failure to detect or prevent material misstatements in our financial statements, which could cause investors to lose confidence in our reported financial information and harm our stock price.

***The United Kingdom's withdrawal from the European Union, commonly referred to as Brexit, may have a negative effect on global economic conditions, financial markets and our business.***

Following a national referendum and enactment of legislation by the government of the United Kingdom, the United Kingdom formally withdrew from the European Union and ratified a trade and cooperation agreement governing its future relationship with the European Union. The agreement, which is being applied provisionally from January 1, 2021 until it is ratified by the European Parliament and the Council of the European Union, addresses trade, economic arrangements, law enforcement, judicial cooperation and a governance framework including procedures for dispute resolution, among other things. Because the agreement merely sets forth a framework in many respects and will require complex additional bilateral negotiations between the United Kingdom and the European Union as both parties continue to work on the rules for implementation, significant political and economic uncertainty remains about how the precise terms of the relationship between the parties will differ from the terms before withdrawal. The U.K.'s withdrawal could potentially disrupt the free movement of goods, services and people between the U.K. and the European Union, undermine bilateral cooperation in key geographic areas and significantly disrupt trade between the U.K. and the European Union or other nations as the U.K. pursues 30 independent trade relations. In addition, Brexit could lead to legal uncertainty and potentially divergent national laws and regulations as the U.K. determines which European Union laws to replace or replicate. The effects of Brexit will depend on any agreements the U.K. makes to retain access to the European Union or other markets either during a transitional period or more permanently. Because this is an unprecedented event, it is unclear what long-term economic, financial, trade and legal implications the withdrawal of the U.K. from the European Union would have and how such withdrawal would affect our business globally and in the region. In addition, Brexit may lead other European Union member countries to consider referendums regarding their European Union membership. These developments, or the perception that any related developments could occur, have had and may continue to have a material adverse effect on global economic conditions and global financial markets, and may significantly reduce global market liquidity, restrict the ability of key market participants to operate in certain financial markets or restrict our access to capital. Any of these factors could have a material adverse effect on our business, financial condition and results of operations and reduce the price of our common stock. Our U.K. operations represented approximately 7 percent of consolidated revenue for the year ended December 31, 2020.

***If we experience changes in tax laws or adverse outcomes resulting from examination of our tax returns, it could adversely affect our results of operations.***

We are subject to federal, state and local income and other taxes in the United States and in foreign jurisdictions. From time to time the United States federal, state, local and foreign governments make substantive changes to tax rules and the application thereof, which could result in materially different corporate taxes than would be incurred under existing tax law or interpretation and could adversely impact profitability. Governments have strengthened their efforts to increase revenues through changes in tax law, including laws regarding transfer pricing, economic presence and apportionment to determine the tax base.

Consequently, significant judgment is required in determining our worldwide provision for income taxes. Our future effective tax rates and the value of our deferred tax assets could be adversely affected by changes in tax laws. In addition, we are subject to the examination of our income tax returns and other tax returns by the Internal Revenue Service and other tax authorities. We regularly assess the likelihood of adverse outcomes resulting from such examinations to determine the adequacy of our provision for income taxes and reserves for other taxes. Although we believe we have made appropriate provisions for taxes in the jurisdictions in which we operate, changes in tax laws, or challenges from tax authorities under existing tax laws could adversely affect our business, financial condition and results of operations.

## ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

## ITEM 2. PROPERTIES

### Properties

Our corporate headquarters and main data center are located in Chicago, Illinois, in an office building that we own. As of December 31, 2020, we lease space in over 100 other locations, including office space and additional data centers. These locations are geographically dispersed to meet our sales and operating needs. We anticipate that suitable additional or alternative space will be available at commercially reasonably terms for future expansion.

## ITEM 3. LEGAL PROCEEDINGS

See Part II, ITEM 8 “FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA—Notes to Consolidated Financial Statements,” Note 20, “Contingencies” for information regarding our legal proceedings.

## ITEM 4. MINE SAFETY DISCLOSURES

Not Applicable.

## INFORMATION ABOUT OUR EXECUTIVE OFFICERS

Our executive officers, and their positions and ages as of February 16, 2021, are set forth below:

| Name | Age | Position |
|---|---|---|
| Christopher A. Cartwright . . . | 55 | President & Chief Executive Officer and Director |
| Todd M. Cello . . . . . . . . . . . . . | 45 | Executive Vice President, Chief Financial Officer |
| Steven M. Chaouki . . . . . . . . . | 48 | President, U.S. Markets |
| John T. Danaher . . . . . . . . . . . | 56 | President, Consumer Interactive |
| Abhinav (Abhi) Dhar . . . . . . . | 49 | Executive Vice President, Chief Information & Technology Officer |
| Timothy J. Martin . . . . . . . . . . | 50 | Executive Vice President, Chief Global Solutions Officer |
| R. Dane Mauldin . . . . . . . . . . . | 50 | Executive Vice President, Chief Operations Officer |
| David M. Neenan . . . . . . . . . . | 55 | President, International |
| Heather J. Russell . . . . . . . . . . | 49 | Executive Vice President, Chief Legal Officer and Corporate Secretary |
| David E. Wojczynski . . . . . . . | 48 | President, Healthcare |

***Christopher A. Cartwright*** has served as the President & Chief Executive Officer of TransUnion and a member of the board of directors since May 2019. He joined the Company in August 2013, previously serving as Executive Vice President - U.S. Information Services, where he helped drive TransUnion's transformation into a global information and insights company as the head of the largest business unit, including providing consumer reports, risk scores, analytical services and decision technology to customers in the U.S. across the financial services, insurance, tenant and employment screening and public sector industries.

Prior to joining TransUnion, Mr. Cartwright was the Chief Executive Officer of Decision Insight Information Group, a portfolio of independent businesses providing real property information, software and services to insurance, finance, legal and real estate professionals in the United States, Canada and Europe. Mr. Cartwright also spent almost 14 years at Wolters Kluwer, a global information services and workflow solutions company, where he held a variety of executive positions of increasing responsibility. Prior to Wolters Kluwer, he was Senior Vice President, Strategic Planning & Operations for Christie's Inc. and Strategy Consultant for Coopers and Lybrand.

Mr. Cartwright received his bachelor's degree in business administration and his master's in public accountancy from The University of Texas at Austin.

***Todd M. Cello*** joined the Company in October 1997 and has held numerous roles with increasing levels of responsibility in the corporate finance department. Mr. Cello has served as our Executive Vice President, Chief Financial Officer since August 2017. Prior to his current role, Mr. Cello served as Senior Vice President and International CFO from August 2015 to August 2017, overseeing financial operations for the International segment. Prior to that, Mr. Cello served as Vice President, Financial Planning and Analysis from January 2009 to August 2015, overseeing the enterprise financial planning and analysis function, where he played a lead role in the two leveraged buyouts of TransUnion in 2010 and 2012 and the initial public offering of TransUnion in 2015. Prior to that, Mr. Cello served as Vice President and U.S. Information Services CFO from October 2005 to December 2008, overseeing financial operations of the U.S. Information Services segment. Mr. Cello also serves on the board of Kaleidoscope, a Chicago-based non-profit child welfare agency.

Mr. Cello received his bachelor's degree in Accounting from University of Illinois at Chicago and is a certified public accountant.

***Steven M. Chaouki*** has served as President, U.S. Markets since May 2019. In this role, Mr. Chaouki oversees TransUnion's U.S. B2B businesses, including: Financial Services, Insurance, Public Sector, Media and Diversified Markets. He previously held the role of Executive Vice President-Financial Services from 2013 until May 2019, where he was responsible for the company's financial services business. This included banks, credit unions, capital markets, financial services resellers, auto lenders and other financial services customers. He also led TransUnion's B2B digital business. Before joining TransUnion, Mr. Chaouki held roles at HSBC in card/retail services and auto finance.

Mr. Chaouki received his bachelor's degree from Boston University and his M.B.A. from the University of Chicago Booth School of Business.

***John T. Danaher*** joined the Company in November 2002 and is currently President, Consumer Interactive. Mr. Danaher has more than 25 years of financial services industry expertise and direct marketing experience and has served as the president of the consumer subsidiary of TransUnion since 2004. Prior to TransUnion, from 2001 to 2002, Mr. Danaher was Chief Operating Officer of TrueLink, Inc., which was acquired by TransUnion. Mr. Danaher joined TrueLink, Inc. from Citibank, where he held several roles including Vice President of E-Commerce, where he was responsible for planning and executing Citibank's E-commerce strategy for home equity loan products. He also served in a variety of leadership roles in operations and technology. Mr. Danaher serves on the board of Dashlane Inc., a password management company that enables users to monitor their online identities across multiple sites and applications.

Mr. Danaher received his B.A. from the University of Toronto and his M.A. from Washington University in St. Louis.

***Abhinav (Abhi) Dhar*** joined the Company in January 2019 as Executive Vice President, Chief Information & Technology Officer. In this role, Mr. Dhar is responsible for all aspects of the company's technology, including strategy, security, applications, operations, infrastructure and delivery of solutions that support TransUnion's global information systems. Prior to TransUnion, Mr. Dhar co-founded Packyge, Inc. in April 2017, a last-mile delivery startup focused on enabling last step in-store digital experiences. Prior to Packyge, he held technology leadership roles at Walgreen Boots Alliance (WBA), a pharmacy retail and wholesale company, including Chief Digital Officer, WBA and Chief Information Officer, Retail Pharmacy USA from November 2016 to April 2017, Chief Information Officer and SVP, Digital Product Management and Innovation from December 2015 to November 2016 and SVP and Chief Information Officer, Walgreens, a pharmacy retail company, from November 2014 to December 2015.

Mr. Dhar received his B.E. in Mechanical Engineering from the National Institute of Engineering in Mysore, India and his M.S. in Industrial Engineering from the New Jersey Institute of Technology.

***Timothy J. Martin*** has served as Executive Vice President, Chief Global Solutions Officer since May 2019. In this role, Mr. Martin is responsible for managing revenue growth and profitability through the strategy, planning, innovation and commercialization of nearly all of TransUnion's products and solutions globally. He previously held business management roles at TransUnion leading both a number of industry vertical-focused teams and a high growth horizontal solution called the Specialized Risk Group. Prior to joining TransUnion in September 2009, Mr. Martin was President and Chief Operating Officer of HSBC Auto Finance where he had direct profit & loss responsibility for all strategy, business development, sales, marketing, pricing, risk management, underwriting operations, customer service and collections. Prior to joining HSBC, he was a consultant with Booz Allen Hamilton (now PWC Strategy&) from 1998 to 2003, and senior marketing analyst with American Airlines from 1992 to 1996. Mr. Martin serves on the board of Juvenile Diabetes Research Foundation of South Florida and the Child Rescue Coalition.

Mr. Martin received his B.S. in Management from Purdue University and his M.B.A. from the University of Michigan Business School.

***R. Dane Mauldin*** has served as Executive Vice President, Chief Operations Officer for TransUnion since May 2019. In this role, Mr. Mauldin leads the organization's focus on operations across the enterprise, including vision, planning and execution required throughout the customer journey. He previously held the role of Chief Product Officer from 2013 until May 2019, where he was responsible for content acquisition, analytic discovery, product development and product delivery across the company's global footprint. Mr. Mauldin has an extensive background in the information solutions industry. Prior to joining TransUnion, he served as Chief Executive Officer of Screening Solutions and Customer Operations for LexisNexis Risk Solutions, a division of Reed Elsevier. Prior roles at LexisNexis included Vice President of Total Customer Experience and Vice President of Collections Market Planning. He also held management positions at Commercial Financial Services and Experian.

Mr. Mauldin received his B.A. in Journalism from the University of Oklahoma.

***David M. Neenan*** joined the Company in September 2012 as President, International. Over the last seven years, he has led the considerable expansion of our International business. Prior to joining TransUnion, he held a variety of positions at HSBC. From 2011 through August 2012, he served as the Global Chief Operations Officer for HSBC's insurance division, expanding his role, having served as the Global Head of Sales and Marketing. From July 2006 through 2008, he served as President and CEO of HSBC Finance, Canada. Mr. Neenan has worked extensively in the US in credit lending and insurance, including leading one of HSBC's largest credit card portfolios. Post receiving his MBA, Mr. Neenan was a member of Boston Consulting Group's financial services practice for a number of years.

Mr. Neenan received his M.A. in Marketing from Kingston University and his M.B.A. from the University of Chicago Booth School of Business.

***Heather J. Russell*** is Executive Vice President, Chief Legal Officer and Corporate Secretary of TransUnion. Ms. Russell is an accomplished legal executive with more than 25 years of diverse experience across the global financial services sector, including expertise in consumer financial services, data privacy and security, regulatory compliance, mergers and acquisitions and FinTech. She is responsible for legal, risk, compliance, government and regulatory relations, corporate governance and consumer privacy functions for TransUnion and its subsidiaries around the world. Prior to joining the Company in 2018, Ms. Russell was a partner at the law firm of Buckley, LLP, from October 2016 until May 2018, where she led the firm's Financial Institutions Regulation, Supervision and FinTech practices. Previously, she served as Executive Vice President, Chief Legal Officer and Corporate Secretary at Fifth Third Bank from September 2015 until July 2016. From July 2011 until August 2015, Ms. Russell was Managing Director and Global Head of Public Policy and Regulatory Affairs at Bank of New York Mellon. Prior to that, she spent five years as Senior Vice President and Associate General Counsel at Bank of America. She also spent eight years at Skadden in Washington, D.C. and London focused on financial services, corporate finance, and mergers and acquisitions.

Ms. Russell received her B.A. from the College of William & Mary and her J.D. with honors from American University's Washington College of Law, where she was recognized with the law school's Outstanding Graduate Award. Ms. Russell serves on the board of Illinois Legal Aid Online, a not for profit charitable organization.

***David E. Wojczynski*** joined the Company in 2010 and is currently President, Healthcare. Before his current role, Mr. Wojczynski served as Senior Vice President and Chief Operating Officer-Healthcare for approximately 8 years where he was responsible for leading the operations and service delivery teams. Prior to joining TransUnion, Mr. Wojczynski served as the Chief Operating Officer at DAXKO, a member-based health and wellness industry software and payments provider. He has also held senior positions at Emageon, a diagnostic imaging software business, Source Medical Solutions, the leading provider of ambulatory surgery center software solutions, and General Electric. Mr. Wojczynski began his career as a military officer and helicopter pilot. Mr. Wojczynski serves on the board of PharmaPoint, LLC, a technology-enabled pharmacy management and software company.

Mr. Wojczynski received his B.S. at United States Military Academy West Point and his M.B.A. at Kellogg School of Management at Northwestern University.

Our executive officers are elected annually by our board of directors. There are no family relationships among any of the Company's executive officers.

## PART II

## ITEM 5. MARKET FOR THE REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

### Market Information

Our common stock has been listed on The New York Stock Exchange under the symbol "TRU" since June 25, 2015.

### Holders of Record

As of January 31, 2021, we had 16 stockholders of record. We have a greater number of beneficial owners of our stock who own their shares through brokerage firms and other nominees.

### Recent Sales of Unregistered Securities

None.

### Issuer Purchases of Equity Securities

| Period | Total Number of Shares Purchased[1] | Average Price Paid Per Share | Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs | Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs[2] |
|---|---|---|---|---|
| October 1 to October 31 | 2,203 | $86.30 | — | $166.6 |
| November 1 to November 30 | 1,292 | 79.66 | — | $166.6 |
| December 1 to December 31 | 2,737 | 93.10 | — | $166.6 |
| Total | 6,232 | $87.91 | — | |

(1) Represents shares that were repurchased from employees for withholding taxes for share-based awards pursuant to the Company's equity compensation plans.

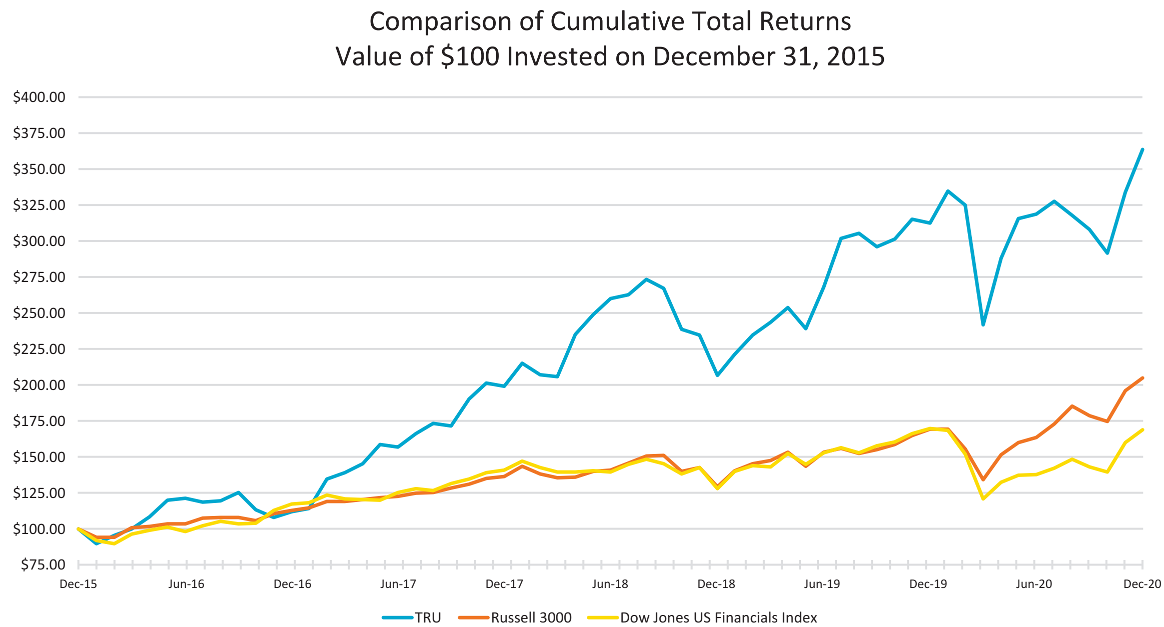
(2) On February 13, 2017, our board of directors authorized the repurchase of up to $300.0 million of our common stock through February 13, 2020. Our board of directors removed the three-year time limitation on February 8, 2018. Prior to the fourth quarter of 2017, we had purchased approximately $133.4 million of common stock under the program and may purchase up to an additional $166.6 million. Additional repurchases may be made from time to time at management's discretion at prices management considers to be attractive through open market purchases or through privately negotiated transactions, subject to availability. Open market purchases will be conducted in accordance with the limitations set forth in Rule 10b-18 of the Exchange Act and other applicable legal requirements.

We have no obligation to repurchase additional shares, and the timing, actual number and value of the shares that are repurchased, if any, will be at the discretion of management and will depend on a number of factors, including market conditions, the cost of repurchasing shares, the availability of alternative investment opportunities, liquidity, and other factors deemed appropriate. Repurchases may be suspended, terminated or modified at any time for any reason. Any repurchased shares will have the status of treasury shares and may be used, if and when needed, for general corporate purposes. While the existing share repurchase program remains authorized by the board of directors, given the uncertainties arising from the COVID-19 pandemic, we do not intend to repurchase additional shares in the short term. We may resume share repurchases in the future at any time, depending upon market conditions, our capital needs and other factors.

**Performance Graph**

*This performance graph shall not be deemed "soliciting material" or to be "filed" with the SEC for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to the liabilities under that Section, and shall not be deemed to be incorporated by reference into any filing of TransUnion under the Securities Act of 1933, as amended, or the Exchange Act.*

The following graph shows a comparison of cumulative total shareholder return for the Company's common stock, the Russell 3000 and the Dow Jones U.S. Financials Index. The graph assumes that $100 was invested at market close on December 31, 2015, in each of the Company's common stock, the Russell 3000 and the Dow Jones U.S. Financial Index. The cumulative total returns for the Russell 3000 and the Dow Jones U.S. Financial Index assume reinvestment of dividends. The stock price performance of the following graph is not necessarily indicative of future stock price performance.



## ITEM 6. SELECTED FINANCIAL DATA

The following table sets forth our selected historical consolidated financial data for the periods ended and as of the dates indicated below.

We have derived the selected historical consolidated financial data as of December 31, 2020 and 2019, and for each of the twelve months ended December 31, 2020, 2019 and 2018 from our audited consolidated financial statements included elsewhere in this report. We have derived the selected historical consolidated financial data as of December 31, 2018, 2017, and 2016 and for the twelve months ended December 31, 2017 and 2016, from our audited consolidated financial statements, which are not included in this report. Our historical results are not necessarily indicative of the results expected for any future period.

You should read the following financial data together with Part I, Item 1A, “Risk Factors,” Part II, Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” our audited consolidated financial statements and related notes appearing elsewhere in this report, and our audited consolidated financial statements and related notes included in our annual reports on Form 10-K for the years ended December 31, 2019 and December 31, 2018 previously filed with the SEC.

Selected financial data consists of the following:

| (dollars in millions) | TransUnion<br>For the Twelve Months Ended December 31,<br>2020 | 2019[1] | 2018[1] | 2017 | 2016 |
|---|---|---|---|---|---|
| Income Statement Data: | | | | | |
| Revenue | $2,716.6 | $2,656.1 | $2,317.2 | $1,933.8 | $1,704.9 |
| Operating expenses | | | | | |
| Cost of services | 920.4 | 874.1 | 790.1 | 645.7 | 579.1 |
| Selling, general and administrative | 860.3 | 812.1 | 707.7 | 585.4 | 560.1 |
| Depreciation and amortization | 367.9 | 362.1 | 306.9 | 238.0 | 265.2 |
| Total operating expense | 2,148.6 | 2,048.3 | 1,804.7 | 1,469.1 | 1,404.4 |
| Operating income (loss) | 567.9 | 607.8 | 512.5 | 464.7 | 300.5 |
| Non-operating income and expense | (112.2) | (167.3) | (169.0) | (92.2) | (95.1) |
| Income from continuing operations before income taxes | 455.8 | 440.5 | 343.5 | 372.5 | 205.4 |
| (Provision) benefit for income taxes | (100.2) | (83.9) | (54.5) | 79.1 | (74.0) |
| Net income (loss) from continuing operations | 355.6 | 356.6 | 289.0 | 451.6 | 131.4 |
| Discontinued operations, net of tax | — | (4.6) | (1.5) | — | — |
| Net income | 355.6 | 352.0 | 287.5 | 451.6 | 131.4 |
| Less: net income attributable to noncontrolling interests | (12.4) | (5.1) | (10.9) | (10.4) | (10.8) |
| Net income (loss) attributable to TransUnion | $ 343.2 | $ 346.9 | $ 276.6 | $ 441.2 | $ 120.6 |
| Net earnings per share from continuing operations: | | | | | |
| Basic | $ 1.81 | $ 1.87 | $ 1.51 | $ 2.42 | $ 0.66 |
| Diluted | $ 1.79 | $ 1.83 | $ 1.46 | $ 2.32 | $ 0.65 |
| Weighted average shares outstanding: | | | | | |
| Basic | 189.9 | 187.8 | 184.6 | 182.4 | 182.6 |
| Diluted | 192.2 | 191.8 | 190.9 | 189.9 | 184.6 |
| Dividends per common share: | $ 0.30 | $ 0.30 | $ 0.23 | $ — | $ — |

| (dollars in millions) | As of December 31,<br>2020 | 2019 | 2018 | 2017 | 2016 |
|---|---|---|---|---|---|
| Balance Sheet Data: | | | | | |
| Total assets[1] | $7,311.6 | $7,113.2 | $7,039.8 | $5,118.5 | $4,781.2 |
| Total debt[1] | $3,454.2 | $3,657.0 | $4,048.1 | $2,464.6 | $2,375.6 |
| Total stockholders' equity | $2,636.1 | $2,339.4 | $1,982.2 | $1,824.6 | $1,473.0 |

(1) We acquired two significant businesses in June 2018 that impacts the comparability of the results of operations between 2017, 2018 and 2019 and the change in total assets at December 31, 2018, compared with December 31, 2017. The change in total debt at December 31, 2018, compared with December 2017, is due to new borrowings to fund these June 2018 business acquisitions.

## ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of TransUnion's financial condition and results of operations is provided as a supplement to, and should be read in conjunction with Part I, Item 1A, "Risk Factors," Part II, Item 6, "Selected Financial Data," and Part II, Item 8, "Financial Statements and Supplementary Information," including TransUnion's audited consolidated financial statements and the accompanying notes. In addition to historical data, this discussion contains forward-looking statements about our business, operations and financial performance based on current expectations that involve risks, uncertainties and assumptions. Our actual results may differ materially from those discussed in the forward-looking statements as a result of various factors, including but not limited to those discussed in "Cautionary Notice Regarding Forward-Looking Statements" and Part I, Item 1A, "Risk Factors."

References in this discussion and analysis to the "Company," "we," "us," and "our" refer to TransUnion and its direct and indirect subsidiaries, including TransUnion Intermediate Holdings, Inc.

### Overview

TransUnion is a leading global information and insights company that strives to make trust possible between businesses and consumers, working to ensure that each person is reliably and safely represented in the marketplace. At TransUnion, we find innovative ways to leverage data and information to help businesses and consumers transact with confidence and achieve great things. We call this Information for Good.

Grounded in our legacy as a credit reporting agency, we have built a robust and accurate database of information for a large portion of the adult population in the markets we serve. We use our data fusion methodology to link and match an increasing set of other disparate data to further enrich our database. We use this enriched data, combined with our expertise, to continuously develop more powerful and useful solutions for our customers, all in accordance with global laws and regulations. Because of our work, organizations can better understand consumers in order to make more informed decisions, and earn consumer trust through great, personalized experiences, and the proactive extension of the right opportunities, tools and offers.

We provide consumer reports, actionable insights and analytics such as credit and other scores, and solutions capabilities to businesses. Businesses embed our solutions into their process workflows to acquire new customers, assess consumer ability to pay for services, identify cross-selling opportunities, measure and manage debt portfolio risk, collect debt, verify consumer identities and investigate potential fraud. Consumers use our solutions to view their credit profiles and access analytical tools that help them understand and manage their personal information and take precautions against identity theft. We have deep domain expertise across a number of attractive industries, which we also refer to as verticals, including Financial Services, Healthcare, Insurance and other markets we serve. We have a global presence in over 30 countries and territories across North America, Latin America, Europe, Africa, India, and Asia Pacific.

Our solutions are based on a foundation of financial, credit, alternative credit, identity, bankruptcy, lien, judgment, healthcare, insurance claims, automotive and other relevant information obtained from thousands of sources including financial institutions, private databases, public records repositories, and other data sources. We refine, standardize and enhance this data using sophisticated algorithms to create proprietary databases. Our technology infrastructure allows us to efficiently integrate our data with our analytics and solutions capabilities to create and deliver innovative solutions to our customers and to quickly adapt to changing customer needs. Our deep analytics resources, including our people and tools driving predictive modeling and scoring, customer segmentation, benchmarking and forecasting, enable us to provide businesses and consumers with better insights into their data. Our solutions capabilities, which are generally delivered on a software-as-a-service platform, allow businesses to interpret data and apply their specific qualifying criteria to make decisions and take actions. Collectively, our data, analytics and solutions capabilities allow businesses to authenticate the identity of consumers, effectively determine the most relevant products for consumers, retain and cross-sell to existing consumers, identify and acquire new consumers and reduce loss from fraud and data breaches. Similarly, our capabilities allow consumers to see how their credit profiles have changed over time, understand the impact of financial decisions on their credit scores, manage their personal information and take precautions against identity theft.

### Segments

We manage our business and report disaggregated revenue and financial results in three reportable segments: U.S. Markets, International and Consumer Interactive.

- The U.S. Markets segment provides consumer reports, actionable insights and analytics such as credit and other scores, and technology solutions capabilities to businesses. These businesses use our services to acquire new customers, assess consumers' ability to pay for services, identify cross-selling opportunities, measure and manage debt portfolio risk, collect debt, verify consumer identities and investigate potential fraud. The core capabilities and delivery methods in our U.S. Markets segment allow us to serve a broad set of customers across industries. We report disaggregated revenue of our U.S. Markets segment for Financial Services and Emerging Verticals.
- The International segment provides services similar to our U.S. Markets segment to businesses in select regions outside the United States. Depending on the maturity of the credit economy in each country, services may include credit reports, analytics and technology solutions services, and other value-added risk management services. We also have insurance, business and automotive databases in select geographies. These services are offered to customers in a number of industries including financial services, retail credit, insurance, automotive, collections, public sector, and communications, and are delivered through both direct and indirect channels. The International segment also provides consumer services similar to those offered by our Consumer Interactive segment that help consumers proactively manage their personal finances.

  We report disaggregated revenue of our International segment for the following regions: Canada, Latin America, the United Kingdom, Africa, India, and Asia Pacific.
- The Consumer Interactive segment offers solutions that help consumers manage their personal finances and take precautions against identity theft. Services in this segment include credit reports and scores, credit monitoring, fraud protection and resolution, and financial management for consumers. The segment also provides solutions that help businesses respond to data breach events. Our products are provided through user-friendly online and mobile interfaces and are supported by educational content and customer support. Our Consumer Interactive segment serves consumers through both direct and indirect channels.

In addition, Corporate provides support services for each of the segments, holds investments, and conducts enterprise functions. Certain costs incurred in Corporate that are not directly attributable to one or more of the segments remain in Corporate. These costs are typically enterprise-level costs and are primarily administrative in nature.

### Factors Affecting Our Results of Operations

The following are certain key factors that affect, or have recently affected, our results of operations:

#### ***Macroeconomic and Industry Trends; Effects of Coronavirus ("COVID-19") on our Business and Results of Operations:***

Our revenues can be significantly influenced by general macroeconomic conditions, including the impact of the global COVID-19 pandemic, the availability of credit and capital, interest rates, inflation, employment levels, consumer confidence and housing demand. The global spread and unprecedented impact of COVID-19 is complex and continues to evolve rapidly.

On March 11, 2020, the World Health Organization declared COVID-19 a global pandemic and recommended extensive containment and mitigation measures worldwide. The outbreak has reached all of the regions in which we do business, and governmental authorities around the world have implemented numerous measures attempting to contain and mitigate the effects of the virus, including travel bans and restrictions, border closings, quarantines, shelter-in-place orders, shutdowns, limitations or closures of non-essential businesses, school closures, social distancing requirements and various economic stimulus initiatives. While certain of these measures have been relaxed or reversed to varying degrees throughout the world, many have subsequently been reinstated and even tightened, adding an additional layer of uncertainty. In the fourth quarter of 2020, several COVID-19 vaccines were approved for use by various governments throughout the world, including in the United States. The vaccines have begun to be distributed and administered in the United States and various other regions where we operate, with varying degrees of success. The ultimate success of these efforts will also be impacted by vaccine manufacturers' ability to successfully produce and effectively distribute adequate doses of the vaccine in a timely manner, the availability of a sufficient number of healthcare workers to administer the vaccines, as well as the public's perception of the safety of the vaccines and their willingness to receive them, among others.

The global spread of COVID-19 and actions taken in response to the virus continue to negatively affect workforces, customers, consumer confidence, financial markets, employment rates, consumer spending, credit markets and housing demand, caused significant economic, business and social disruptions, volatility and financial uncertainty, and led to a significant economic downturn, including in the markets where we operate. Businesses and consumers continue to react and adapt to the uncertainty with varying degrees of success in the markets where we operate. Since mid-March 2020, the COVID-19 pandemic, widespread measures implemented to contain its effects, and business and consumer responses to such measures, have had a material and adverse impact on numerous aspects of our business, including customer demand for our services and solutions in all of our segments. While we have seen some signs of increased demand for our services in the markets where we operate since the low point in April 2020, including ongoing improvements through the fourth quarter 2020, the impact of COVID-19, including government measures and business and consumer responses to such measures, may continue to have a material adverse impact on our business for an uncertain period of time. In addition, if the pandemic continues to create significant disruptions in the credit or financial markets, or impacts our credit ratings, it could adversely impact our ability to access capital on favorable terms or at all.

In the face of these challenges, our primary focus has been and continues to be the health and safety of our associates, our customers, and the wider communities in which we operate. We quickly and effectively moved to a work-from-home model in the early days of the pandemic in every market we serve, and continue to adhere to that model. This has allowed us to protect our associates and the broader population while continuing to operate our businesses and provide services and solutions to customers and consumers. In addition, we have taken several actions to support those who are financially impacted by the COVID-19 pandemic in the jurisdictions where we operate. We remain focused on ensuring impacted consumers are aware of resources and relief available to them, and we are working directly with our partners across the broader consumer credit ecosystem. We are also working with trade associations and industry peers to develop additional proactive solutions to help impacted consumers and to facilitate access to resources and educational materials aimed at consumers.

The decline in demand for our services and solutions due to COVID-19 resulted in a reduction in certain costs that vary with revenue. In addition, we continue to monitor our cost base and have taken and will continue to take actions with the goal of maintaining financial liquidity and flexibility, such as temporarily halting our travel-related expenses, slowing new hiring as we develop our understanding of the shape and the speed of the expected recovery and canceling in-person meetings. We continue to monitor and plan for other cost levers that we can pull and will evaluate whether additional cost control measures are necessary or desirable to enhance our liquidity and financial profile as the effects of the COVID-19 pandemic continue to evolve. However, there is no certainty that such measures, or measures that we have already taken, will be successful in mitigating the numerous operational, health and financial risks posed by COVID-19 and it may be necessary to further modify our business practices in the future, which could further materially and adversely impact our consolidated financial statements in future periods.

The extent to which COVID-19 impacts our business, operations and our consolidated financial statements is inherently uncertain and will depend on numerous evolving factors that we may not be able to accurately predict, including: the duration, scope and severity of the pandemic; the effectiveness and adoption of vaccine programs: the impact on worldwide macroeconomic conditions during and after the pandemic, including interest rates, employment rates, consumer confidence, and foreign exchange rates in each of the markets in which we operate; governmental, business and individuals' actions that have been taken and continue to evolve in response to the pandemic, which could include limitations on and changes to our operations or mandates to provide services; the effect on our customers; changes in customer and consumer demand for our services; the effect on consumer confidence and spending; our ability to sell and provide our services, including the impact of travel restrictions and people working from home; the ability of our customers to pay for our services on a timely basis or at all; the health of, and the effect on, our workforce; our ability to maintain sufficient liquidity; and the potential effects on our internal controls, including those over financial reporting, as a result of changes in working environments for our employees, business partners and suppliers. Each of these factors could cause or contribute to the risks and uncertainties described in Part I, Item 1.A, "Risk Factors", and could further materially and adversely impact our business, consolidated financial statements and our stock price.

We have assessed various accounting estimates and other matters, including those that require consideration of forecasted financial information, in context with the unknown future impacts of COVID-19 using information that is reasonably available to us at this time. The accounting estimates and other matters we have assessed include, but were not limited to, our allowance for doubtful accounts, stock-based compensation, goodwill and other long-lived assets, financial assets, valuation allowances for tax assets and revenue recognition. While our current assessment of these estimates did not have a material impact on our consolidated financial statements as of and for twelve months ended December 31, 2020, as additional information becomes available to us, our future assessment of these estimates, including our expectations at the time regarding the duration, scope and severity of the pandemic, as well as other factors, could materially and adversely impact our consolidated financial statements in future reporting periods.

Our revenues are also significantly influenced by industry trends, including the demand for information services in financial services, healthcare, insurance and other industries we serve. Companies are increasingly relying on business analytics and big-data technologies to help process data in a cost-efficient manner. As customers have gained the ability to rapidly aggregate and analyze data generated by their own activities, they are increasingly expecting access to real-time data and analytics from their information service providers as well as solutions that fully integrate into their workflows. In the long term, and once the impact of COVID-19 subsides, we believe demand for consumer solutions will increase, with higher consumer awareness of the importance and usage of their credit information, increased risk of identity theft due to data breaches, and more readily available free credit information. The complexity of existing regulations and the emergence of new regulations across the globe, including new and future COVID-19 related regulations on consumer and business activities and interactions and stimulus packages, will continue to make operations for businesses more complex.

***Effects of Inflation***

We do not believe that inflation has had a material effect on our business, results of operations or financial condition.

***Recent Developments***

The following developments impact the comparability of our balance sheets, results of operations and cash flows between years:

On March 11, 2020, the World Health Organization declared COVID-19 a global pandemic and recommended extensive containment and mitigation measures worldwide. Since mid-March 2020, the COVID-19 pandemic and widespread measures implemented to contain its effects, and business and consumer responses to such measures have had a material and adverse impact on numerous aspects of our business, including customer demand for our services and solutions in all of our segments. While we have seen signs of increased demand for our services in the markets where we operate since the low point in April 2020, including ongoing improvements through the fourth quarter 2020, the impact of COVID-19, including government measures and business and consumer responses to such measures, may continue to have a material adverse impact on our business for an uncertain period of time.

On March 10, 2020, we entered into two tranches of interest rate swap agreements with various counter-parties that effectively fixes our LIBOR exposure on a portion of our Senior Secured Term Loans or similar replacement debt. The first tranche commenced on June 30, 2020 and expires on June 30, 2022 with a current aggregate notional amount of $1,140.0 million which amortizes each quarter. The first tranche requires TransUnion to pay fixed rates varying between 0.5200% and 0.5295% in exchange for receiving a variable rate which matches the variable rate on our loans. The second tranche commences on June 30, 2022 and expires on June 30, 2025 with a current aggregate notional amount of $1,110.0 million which amortizes each quarter. The second tranche requires TransUnion to pay fixed rates varying between 0.9125% and 0.9280% in exchange for receiving a variable rate which matches the variable rate on our loans. We have designated these swap agreements as cash flow hedges.

On February 27, 2020, the United States Court of Appeals for the Ninth Circuit affirmed in part and reversed and vacated in part the trial court’s judgment in Ramirez v. Trans Union LLC, reducing the trial court’s punitive damages award from approximately $52 million to approximately $32 million. As a result, at that time we recorded $30.5 million of legal expense in selling, general and administrative expenses in 2020. We recorded an additional reserve for this matter in the third quarter of 2020. On December 16, 2020, the United States Supreme Court granted the Petition for *Certiorari* with respect to whether Article III of the United States Constitution or Rule 23 of the Federal Rules of Civil Procedure permit a damages class action where the vast majority of the class suffered no actual injury, let alone an injury anything like what the class representative suffered. Oral argument is scheduled for March 30, 2021, with a ruling expected to be issued by June 30, 2021. See Item 8, “Notes to Consolidated Financial Statements,” Note 20, “Contingencies” for additional information.

In December 2020, we prepaid $150.0 million of our Senior Secured Term Loans, funded from our cash on hand. During 2019, we prepaid $340.0 million of our Senior Secured Term Loans, also funded from cash on hand. These transactions affect the comparability of interest expense between 2020, 2019 and 2018 as further discussed in “Results of Operations—Non-Operating Income and Expense” below.

On November 15, 2019, we refinanced our B-3 and B-4 loans with a new tranche of Senior Secured Term Loan B (“Senior Secured Term Loan B-5”) which, along with cash of $9.0 million, was used to pay-off the Senior Secured Term Loan B-3 and Senior Secured Term Loan B-4 loans. On December 10, 2019, we refinanced our A-2 loan with a new tranche of Senior Secured Term Loan A (“Senior Secured Term Loan A-3”), which was used to pay-off our existing Senior Secured Term Loan A-2 loans. With this refinance, we also converted the existing Senior Secured Revolving Line of Credit into a new Senior Secured Revolving Line of Credit.

In early July 2019, we determined that TransUnion Limited, a Hong Kong entity that is included in our International segment and in which we hold a 56.25 percent interest, was the victim of criminal fraud (the “Fraud Incident”). The Fraud Incident involved employee impersonation and fraudulent requests targeting TransUnion Limited, which resulted in a series of fraudulently-induced unauthorized wire transfers totaling $17.8 million in early July 2019 that is included in other income and (expense), net, on our Consolidated Statements of Income. In addition to these wire transfers, we have incurred additional administrative expenses investigating the incident and enhancing our controls, which are included in selling, general and administrative expenses. During the period ending December 31, 2019, we incurred a net after tax loss of $17.3 million, of which $7.3 million is attributable to the non-controlling interest and $10.0 million is attributable to TransUnion. During the period ending December 31, 2020, we recovered $1.8 million of these fraudulently-induced unauthorized wire transfers net of additional administrative expenses, of which $1.1 million is attributable to TransUnion and $0.7 million is attributable to the non-controlling interest. There was no impact on Adjusted EBITDA as the net impact of the Fraud Incident was added back to Adjusted EBITDA as presented in the tables below.

On December 17, 2018, we entered into interest rate swap agreements with various counter-parties that effectively fix our LIBOR exposure on a portion of our Senior Secured Term Loans or similar replacement debt, which is currently fixed at 2.702% and 2.706%.

During the second quarter of 2018, we borrowed $1.925 billion of additional debt against our Senior Secured Credit Facility to fund the purchase of three acquisitions as discussed in “Recent Acquisitions and Partnerships” below and to repay a portion of our Senior Secured Revolving Line of Credit. These transactions affect the comparability of interest expense between 2019 and 2018 as further discussed in “Results of Operations—Non-Operating Income and Expense” below.

***Recent Acquisitions***

We selectively evaluate acquisitions as a means to expand our business and to enter new markets. Since January 1, 2018, we have completed the following acquisitions, including those that impact the comparability of our results between periods:

- On October 14, 2020, we acquired 100% of the equity of Tru Optik Data Corp (“Tru Optik”). Tru Optik uses its custom audience-building platform to deliver predictive scoring to improve the performance of custom digital marketing campaigns. The results of operations of Tru Optik, which are not material to our consolidated financial statements, have been included as part of our U.S. Markets segment in our consolidated statements of income since the date of the acquisition.
- On August 14, 2020, we acquired 100% of the equity of Signal Digital, Inc. (“Signal”). Signal is a digital marketing company that provides tag management, data collection, and onboarding capabilities to customers for activation in the marketing ecosystem. The results of operations of Signal, which are not material to our consolidated financial statements, have been included as part of our U.S. Markets segment in our consolidated statements of income since the date of the acquisition.
- On May 22, 2019, we acquired 100% of the equity of TruSignal, Inc. (“TruSignal”). TruSignal is an innovative leader in people-based marketing technology for Fortune 500 brands, agencies, platforms, publishers and data owners. TruSignal uses predictive scoring, powered by artificial intelligence, to make data actionable for one-to-one addressable marketing. The results of operations of TruSignal, which are not material to our consolidated financial statements, have been included as part of our U.S. Markets segment in our consolidated statements of income since the date of the acquisition.
- On October 15, 2018, we acquired 100% of the equity of Rubixis, Inc. (“Rubixis”). Rubixis is an innovative healthcare revenue cycle solutions company that helps providers maximize reimbursement from insurance payers. Rubixis brings specialized expertise in the management of denials and underpayments, two significant pain points for healthcare providers. The results of operations of Rubixis, which are not material to our consolidated financial statements, have been included as part of our U.S. Markets segment in our consolidated statements of income since the date of the acquisition.
- On June 29, 2018, we acquired 100% of the equity of iovation, Inc. (“iovation”). iovation is a provider of advanced device identity and consumer authentication services that helps businesses and consumers safely transact in a digital world. The results of operations of iovation, which are not material to our consolidated financial statements, have been included as part of our U.S. Markets segment in our consolidated statements of income since the date of the acquisition.
- On June 19, 2018, we acquired 100% of the equity of Callcredit Information Group, Ltd. (“Callcredit”). Callcredit is an information solutions company based in the United Kingdom, founded in 2000 that provides data, analytics and technology solutions to help businesses and consumers make informed decisions. The results of operations of Callcredit have been included as part of our International segment in our consolidated statements of income since the date of the acquisition.

- On June 1, 2018, we acquired 100% of the equity of Healthcare Payment Specialists, LLC ("HPS"). This part of our Healthcare operating segment provides expertise and technology solutions to help medical care providers maximize Medicare reimbursements. The results of operations of HPS, which are not material to our consolidated financial statements, have been included as part of our U.S. Markets segment in our consolidated statements of income since the date of the acquisition.

**Key Components of Our Results of Operations**

***Revenue***

The following is a more detailed description of how we derive and report revenue for our three reportable segments:

*U.S. Markets*

U.S. Markets provides consumer reports, actionable insights and analytics such as credit and other scores, and solutions capabilities to businesses. These businesses use our services to acquire new customers, assess consumers' ability to pay for services, identify cross-selling opportunities, measure and manage debt portfolio risk, collect debt, verify consumer identities and investigate potential fraud. The core capabilities and delivery methods in our U.S. Markets segment allow us to serve a broad set of customers across industries. We report disaggregated revenue of our U.S. Markets segment for the following verticals:

- *Financial Services:* The Financial Services vertical, which accounts for approximately 55.4% of our 2020 U.S. Markets revenue, consists of our consumer lending, mortgage, auto and cards and payments lines of business. Our financial services clients consist of most banks, credit unions, finance companies, auto lenders, mortgage lenders, online-only lenders (FinTech), and other consumer lenders in the United States. We also distribute our solutions through most major resellers, secondary market players and sales agents. Beyond traditional lenders, we work with a variety of credit arrangers, such as auto dealers and peer-to-peer lenders. We provide solutions across every aspect of the lending lifecycle; customer acquisition and engagement, fraud and ID management, retention and recovery. Our products are focused on mitigating risk and include credit reporting, credit marketing, analytics and consulting, identity verification and authentication and debt recovery solutions.
- *Emerging Verticals:* Emerging Verticals include Healthcare, Insurance, Tenant and Employment, Collections, Public Sector, Media, Diversified Markets and other verticals. Our solutions in these verticals are also data-driven and address the entire customer lifecycle. We offer onboarding and transaction processing products, scoring and analytic products, marketing solutions, fraud and identity management solutions and customer retention solutions.

*International*

The International segment provides services similar to our U.S. Markets segment to businesses in select regions outside the United States. Depending on the maturity of the credit economy in each country, services may include credit reports, analytics and solutions services, and other value-added risk management services. In addition, we have insurance, business and automotive databases in select geographies. These services are offered to customers in a number of industries including financial services, insurance, automotive, collections, and communications, and are delivered through both direct and indirect channels. The International segment also provides consumer services similar to those offered by our Consumer Interactive segment that help consumers proactively manage their personal finances.

We report disaggregated revenue of our International segment for the following regions: Canada, Latin America, the United Kingdom, Africa, India, and Asia Pacific.

*Consumer Interactive*

The Consumer Interactive segment offers solutions that help consumers manage their personal finances and take precautions against identity theft. Services in this segment include credit reports and scores, credit monitoring, fraud protection and resolution, and financial management for consumers. The segment also provides solutions that help businesses respond to data breach events. Our products are provided through user-friendly online and mobile interfaces and are supported by educational content and customer support. Our Consumer Interactive segment serves consumers through both direct and indirect channels.

***Cost of Services***

Costs of services include data acquisition and royalty fees, personnel costs related to our databases and software applications, consumer and call center support costs, hardware and software maintenance costs, telecommunication expenses and occupancy costs associated with the facilities where these functions are performed.

***Selling, General and Administrative***

Selling, general and administrative expenses include personnel-related costs for sales, administrative and management employees, costs for professional and consulting services, advertising and occupancy and facilities expense of these functions.

***Non-Operating Income and Expense***

Non-operating income and expense includes interest expense, interest income, earnings from equity-method investments, dividends from cost-method investments, impairments of equity-method and cost-method investments, if any, expenses related to successful and unsuccessful business acquisitions, loan fees, debt refinancing expenses, certain acquisition-related gains and losses and other non-operating income and expenses.

**Results of Operations—Twelve Months Ended December 31, 2020, 2019 and 2018**

***Key Performance Measures***

Management, including our chief operating decision maker ("CODM"), evaluates the financial performance of our businesses based on a variety of key indicators. These indicators include the GAAP measures of revenue, segment Adjusted EBITDA, cash provided by operating activities and cash paid for capital expenditures and the non-GAAP measures Adjusted Revenue and consolidated Adjusted EBITDA. For the twelve months ended December 31, 2020, 2019 and 2018, these key indicators were as follows:

| | Twelve months ended December 31, | | | Change | | | |
|---|---|---|---|---|---|---|---|
| | | | | 2020 vs. 2019 | | 2019 vs. 2018 | |
| (dollars in millions) | 2020 | 2019 | 2018 | $ | % | $ | % |
| **Revenue:** | | | | | | | |
| Consolidated revenue as reported | $2,716.6 | $2,656.1 | $2,317.2 | $ 60.5 | 2.3% | $338.9 | 14.6% |
| Acquisition revenue related adjustments[2] | — | 5.9 | 28.1 | (5.9) | nm | (22.2) | nm |
| Consolidated Adjusted Revenue[1] | $2,716.6 | $2,662.0 | $2,345.3 | $ 54.6 | 2.1% | $316.7 | 13.5% |
| U.S. Markets gross revenue | $1,696.6 | $1,609.6 | $1,444.7 | $ 87.0 | 5.4% | $164.9 | 11.4% |
| Acquisition revenue related adjustments[2] | — | 0.4 | 2.0 | (0.4) | nm | (1.6) | nm |
| U.S. Markets gross Adjusted Revenue | $1,696.6 | $1,610.0 | $1,446.7 | $ 86.7 | 5.4% | $163.3 | 11.3% |
| International gross revenue | $ 582.7 | $ 623.5 | $ 472.4 | $(40.8) | (6.5)% | $151.1 | 32.0% |
| Acquisition revenue related adjustments[2] | — | 5.6 | 26.1 | (5.6) | nm | (20.6) | nm |
| International gross Adjusted Revenue | $ 582.7 | $ 629.1 | $ 498.5 | $(46.4) | (7.4)% | $130.6 | 26.2% |
| Consumer Interactive gross revenue | $ 513.1 | $ 497.8 | $ 475.8 | $ 15.3 | 3.1% | $ 21.9 | 4.6% |

*nm: not meaningful*

*As a result of displaying amounts in millions, rounding differences may exist in the table above.*

**Reconciliation of net income attributable to TransUnion to consolidated Adjusted EBITDA(1):**

| (dollars in millions) | Twelve Months Ended December 31, 2020 | 2019 | 2018 | Change 2020 vs. 2019 $ | % | Change 2019 vs. 2018 $ | % |
|---|---|---|---|---|---|---|---|
| Net income attributable to TransUnion | $ 343.2 | $ 346.9 | $ 276.6 | $ (3.7) | (1.1)% | $ 70.4 | 25.4% |
| Discontinued operations | — | 4.6 | 1.5 | (4.6) | nm | 3.1 | nm |
| Net income from continuing operations attributable to TransUnion | 343.2 | 351.5 | 278.1 | (8.3) | (2.4)% | 73.4 | 26.4% |
| Net interest expense | 120.7 | 166.1 | 132.0 | (45.4) | (27.4)% | 34.1 | 25.8% |
| Provision (benefit) for income taxes | 100.2 | 83.9 | 54.5 | 16.3 | 19.5% | 29.4 | 53.9% |
| Depreciation and amortization | 367.9 | 362.1 | 306.9 | 5.8 | 1.6% | 55.2 | 18.0% |
| EBITDA | 931.9 | 963.6 | 771.5 | (31.6) | (3.3)% | 192.1 | 24.9% |
| Adjustments to EBITDA: | | | | | | | |
| Acquisition-related revenue adjustments(2) | — | 5.9 | 28.1 | (5.9) | nm | (22.2) | nm |
| Stock-based compensation(3) | 48.4 | 58.1 | 61.4 | (9.6) | (16.6)% | (3.4) | (5.5)% |
| Mergers and acquisitions, divestitures and business optimization(4) | 9.7 | 1.7 | 38.7 | 8.1 | nm | (37.1) | (95.7)% |
| Technology Transformation(5) | 19.3 | — | — | 19.3 | nm | — | nm |
| Other(6) | 35.5 | 29.7 | 17.2 | 5.8 | 19.4% | 12.5 | 72.7% |
| Total adjustments to EBITDA | 112.9 | 95.4 | 145.4 | 17.6 | 18.4% | (50.1) | (34.4)% |
| Consolidated Adjusted EBITDA(1) | $1,044.9 | $1,058.9 | $ 916.9 | $(14.1) | (1.3)% | $142.0 | 15.5% |
| **Other Metrics:** | | | | | | | |
| Cash provided by continuing operations | $ 787.4 | $ 784.0 | $ 559.4 | $ 3.4 | 0.4% | $224.6 | 40.1% |
| Capital expenditures | $ (214.1) | $ (198.5) | $(180.1) | $(15.6) | 7.9% | $ (18.4) | 10.2% |

*nm: not meaningful*

*As a result of displaying amounts in millions, rounding differences may exist in the table above.*

1. We define Adjusted Revenue as GAAP revenue adjusted for certain acquisition-related deferred revenue and non-core contract-related revenue. Beginning in the third quarter of 2019, we no longer have these adjustments to revenue. We define Adjusted EBITDA as net income (loss) attributable to TransUnion plus (less) loss (income) from discontinued operations, plus net interest expense, plus (less) provision (benefit) for income taxes, plus depreciation and amortization, plus (less) the revenue adjustments included in Adjusted Revenue, plus stock-based compensation, plus mergers, acquisitions, divestitures and business optimization-related expenses including Callcredit integration-related expenses, plus certain accelerated technology investment expenses to migrate to the cloud, plus (less) certain other expenses (income). We present Adjusted Revenue as a supplemental measure of revenue because we believe it provides a basis to compare revenue between periods. We present Adjusted EBITDA as a supplemental measure of our operating performance because it eliminates the impact of certain items that we do not consider indicative of our cash operations and ongoing operating performance. Adjusted EBITDA is also a measure frequently used by securities analysts, investors and other interested parties in their evaluation of the operating performance of companies similar to ours. Our board of directors and executive management team use Adjusted EBITDA as a compensation measure under our incentive compensation plan. Under the credit agreement governing our Senior Secured Credit Facility, our ability to engage in activities such as incurring additional indebtedness, making investments and paying dividends is tied to a ratio based on Adjusted EBITDA. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Debt." Adjusted EBITDA does not reflect our capital expenditures, interest, income tax, depreciation, amortization, stock-based compensation and certain other income and

expense. Other companies in our industry may calculate Adjusted EBITDA differently than we do, limiting its usefulness as a comparative measure. Because of these limitations, Adjusted EBITDA should not be considered in isolation or as a substitute for performance measures calculated in accordance with GAAP. Adjusted EBITDA is not a measure of financial condition or profitability under GAAP and should not be considered as an alternative to cash flows from operating activities, as a measure of liquidity or as an alternative to operating income or net income as indicators of operating performance. We believe that the most directly comparable GAAP measure to Adjusted EBITDA is net income attributable to TransUnion. The table above provides a reconciliation from our net income (loss) attributable to TransUnion to consolidated Adjusted EBITDA for the twelve months ended December 31, 2020, 2019 and 2018.

2. This adjustment represents certain non-cash adjustments related to acquired entities, predominantly adjustments to increase revenue resulting from purchase accounting reductions to deferred revenue we record on the opening balance sheets of acquired entities. Deferred revenue results when a company receives payment in advance of fulfilling their performance obligations under contracts. Business combination accounting rules require us to record deferred revenue of acquired entities at fair value if we are obligated to perform any future services under these contracts. The fair value of this deferred revenue is determined based on the direct and indirect incremental costs of fulfilling our performance obligations under these contracts, plus a normal profit margin. Generally, this fair value calculation results in a reduction to the purchased deferred revenue balance. The above adjustment includes an estimate for the increase in revenue equal to the difference between what the acquired entities would have recorded as revenue and the lower revenue we record as a result of the reduced deferred revenue balance. This increase is partially offset by an estimated decrease to revenue for certain acquired non-core customer contracts that are not classified as discontinued operations that will expire within approximately one year from the date of acquisition. Beginning in the third quarter of 2019, we no longer have these adjustments to revenue. We present Adjusted Revenue as a supplemental measure of our revenue because we believe it provides meaningful information regarding our revenue and provides a basis to compare revenue between periods. In addition, our board of directors and executive management team use Adjusted Revenue as a compensation measure under our incentive compensation plans. The table above provides a reconciliation for revenue to Adjusted Revenue.

3. Consisted of stock-based compensation and cash-settled stock-based compensation.

4. For the twelve months ended December 31, 2020, consisted of the following adjustments: $8.3 million of acquisition expenses; $7.5 million of Callcredit integration costs; a $4.8 million loss on the impairment of a Cost Method investment; $1.6 million of adjustments to contingent consideration expense from previous acquisitions; an ($8.1) million remeasurement gain on notes receivable that were converted into equity upon acquisition and consolidation of an entity; a ($2.5) million gain on a Cost Method investment resulting from an observable price change for a similar investment of the same issuer; a ($1.8) million gain on the disposal of assets of a small business in our United Kingdom region; and a ($0.1) million reimbursement for transition services provided to the buyers of certain of our discontinued operations.

   For the twelve months ended December 31, 2019, consisted of the following adjustments: a $(31.2) million gain on a Cost Method investment resulting from an observable price change for a similar investment of the same issuer; a $(0.5) million reimbursement for transition services provided to the buyers of certain of our discontinued operations; $15.8 million of Callcredit integration costs; a $10.0 million loss on the impairment of certain Cost Method investments; a $3.7 million loss on assets of a small business in our United Kingdom region that are classified as held-for-sale; $2.6 million of acquisition expenses; and a $1.2 million adjustment to contingent consideration expense from previous acquisitions.

For the twelve months ended December 31, 2018, consisted of the following adjustments: $29.3 million of acquisition expenses; $6.8 million of Callcredit integration costs; a $2.3 million loss on the divestiture of a small business operation; a $0.4 million adjustment to contingent consideration expense from previous acquisitions; and $(0.1) million of miscellaneous.

5. Represents expenses associated with our accelerated technology investment to migrate to the cloud.
6. For the twelve months ended December 31, 2020, consisted of the following adjustments: $34.7 million for certain legal expenses; $1.6 million of loan fees; $0.9 million of deferred loan fees written off as a result of the prepayments on our debt; $0.2 million loss from currency remeasurement of our foreign operations; $0.2 million of fees related to our new swap agreements; a $(1.5) million recovery from the Fraud Incident, net of additional administrative expense; $(0.4) million reimbursement of fees associated with the refinancing of our Senior Secured Credit Facility; and $(0.2) million of other.

   For the twelve months ended December 31, 2019, consisted of the following adjustments: $20.8 million of expenses (including $3.0 million of administrative expenses) associated with the Fraud Incident offset by the $(7.3) million portion that is attributable to the non-controlling interest; $13.0 million of fees related to the refinancing of Senior Secured Credit Facility; $2.0 million of deferred loan fees written off as a result of the prepayments on our debt; $2.0 million of loan fees; and a $0.1 million loss from currency remeasurement; a $(0.7) million reduction to expense for certain legal and regulatory matters; and $(0.1) million of miscellaneous.

   For the twelve months ended December 31, 2018, consisted of the following adjustments: $12.0 million of fees related to new financing under our Senior Secured Credit Facility; a $3.8 million loss from currency remeasurement; $1.6 million of loan fees; $0.5 million of fees incurred in connection with a secondary offering of shares of TransUnion common stock by certain of our stockholders; and a $(0.7) million mark-to-market gain related to ineffectiveness of our interest rate hedge.

***Revenue***

Since mid-March 2020, the COVID-19 pandemic and widespread measures implemented to contain its effects and business and consumer responses to such measures have had a material and adverse impact on numerous aspects of our business, including customer demand for our services and solutions in all of our segments. While we continue to see improvements in demand for our services in the markets where we operate since the low point in April 2020, including ongoing improvements through the fourth quarter 2020, the impact of COVID-19, including government measures and business and consumer responses to such measures, may continue to have a material adverse impact on our business for an uncertain period of time.

For 2020, revenue increased $60.5 million compared with 2019, due primarily to organic growth in the Financial Services vertical in the U.S. Markets segment, the Consumer Interactive segment, and the Canada region in the International segment, revenue from recent acquisitions in U.S. Markets Emerging Verticals, and revenue from new product initiatives, partially offset by a decrease in revenue in the U.S. Markets Emerging Verticals and the other regions of the International segment, and a 0.8% decrease from the impact of weakening foreign currencies.

For 2019, revenue increased $338.9 million compared with 2018, due to organic growth in all of our segments, including both the U.S. Markets Financial Services and Emerging Verticals and all of the International regions, revenue from our recent acquisitions in our U.S. Markets and International segments, and revenue from new product initiatives, partially offset by the impact of weakening foreign currencies in our International segment. Recent acquisitions accounted for an increase in revenue of 5.1%. The impact of weakening foreign currencies accounted for a decrease in revenue of 1.0%.

Revenue by segment and a more detailed explanation of revenue within each segment are as follows:

| (dollars in millions) | Twelve months ended December 31, 2020 | 2019 | 2018 | Change 2020 vs. 2019 $ | % | Change 2019 vs. 2018 $ | % |
|---|---|---|---|---|---|---|---|
| **U.S. Markets:** | | | | | | | |
| Financial Services | $ 939.6 | $ 849.0 | $ 765.1 | $ 90.6 | 10.7% | $ 83.9 | 11.0% |
| Emerging Verticals | 757.0 | 760.6 | 679.6 | (3.6) | (0.5)% | 81.0 | 11.9% |
| **U.S. Markets gross revenue** | 1,696.6 | 1,609.6 | 1,444.7 | 87.0 | 5.4% | 164.9 | 11.4% |
| **International:** | | | | | | | |
| Canada | 108.0 | 104.1 | 96.0 | 3.9 | 3.7% | 8.1 | 8.4% |
| Latin America | 86.5 | 104.2 | 102.3 | (17.7) | (17.0)% | 2.0 | 1.9% |
| UK | 183.1 | 186.7 | 71.3 | (3.6) | (1.9)% | 115.4 | nm |
| Africa | 49.0 | 61.2 | 64.2 | (12.2) | (20.0)% | (3.0) | (4.7)% |
| India | 100.0 | 108.1 | 81.8 | (8.1) | (7.5)% | 26.3 | 32.1% |
| Asia Pacific | 56.2 | 59.1 | 56.7 | (3.0) | (5.0)% | 2.4 | 4.3% |
| **International gross revenue** | 582.7 | 623.5 | 472.4 | (40.8) | (6.5)% | 151.1 | 32.0% |
| **Consumer Interactive gross revenue** | 513.1 | 497.8 | 475.8 | 15.3 | 3.1% | 21.9 | 4.6% |
| **Total gross revenue** | $2,792.5 | $2,730.9 | $2,392.9 | $ 61.6 | 2.3% | $338.0 | 14.1% |
| **Intersegment revenue eliminations:** | | | | | | | |
| U.S. Markets | $ (68.9) | $ (68.7) | $ (70.0) | $ (0.2) | nm | $ 1.2 | nm |
| International | (5.2) | (5.1) | (5.1) | (0.1) | nm | — | nm |
| Consumer Interactive | (1.7) | (1.0) | (0.7) | (0.8) | nm | (0.3) | nm |
| **Total intersegment revenue eliminations** | (75.9) | (74.8) | (75.7) | (1.1) | nm | 0.9 | nm |
| **Total revenue as reported** | $2,716.6 | $2,656.1 | $2,317.2 | $ 60.5 | 2.3% | $338.9 | 14.6% |

*nm: not meaningful*

*As a result of displaying amounts in millions, rounding differences may exist in the table above.*

*U.S. Markets Segment*

For 2020, U.S. Markets revenue increased $87.0 million compared with 2019, due to an increase in revenue in the Financial Services vertical, partially offset by a decrease in revenue in Emerging Verticals.

Since mid-March 2020, the COVID-19 pandemic, widespread measures implemented to contain its effects and business and consumer responses to such measures have had a material and adverse impact on numerous aspects of our business, including customer demand for our services and solutions in our U.S Markets segment. While we continue to see improvements in demand for our services in the markets where we operate since the low point in April 2020, including ongoing improvements through the fourth quarter 2020, the impact of COVID-19, including government measures and business and consumer responses to such measures, may continue to have a material adverse impact on our U.S Markets segment for an uncertain period of time.

For 2019, U.S. Markets revenue increased $164.9 million compared with 2018, due to increases in revenue from both verticals, including an increase of 3.1% from recent acquisitions.

*Financial Services:* For 2020, Financial Services revenue increased $90.6 million due primarily to improvements in market conditions in our mortgage line of business, as historically low interest rates drove refinance activity and the home purchase market experienced modest growth. The growth in the mortgage line of business, which may not persist, was partially offset by decreases in our other lines of business, which have shown signs of improvement since the lows in April 2020.

For 2019, Financial Services revenue increased $83.9 million due primarily to improvements in market conditions in all of our lines of business, an increase from new product initiatives, and an increase in our credit marketing services revenue.

*Emerging Verticals:* For 2020, Emerging Verticals revenue decreased $3.6 million due primarily to a decrease in the Healthcare, Collections, and Diversified Markets verticals, partially offset by an increase in the Media, Public Sector, Insurance and Tenant & Employment verticals. Recent acquisitions accounted for an increase in revenue of 1.3%.

For 2019, Emerging Verticals revenue increased $81.0 million due primarily to an increase from new product initiatives and other organic growth in our emerging verticals, particularly our Insurance, Healthcare and Diversified Markets verticals, and an increase of 5.2% from recent acquisitions.

*International Segment*

For 2020, International revenue decreased $40.8 million, or 6.5%, compared with 2019. The decrease was due primarily to the impact of COVID-19, and a decrease of 3.5% from the impact of weakening foreign currencies.

Since mid-March 2020, the COVID-19 pandemic, widespread measures implemented to contain its effects, and business and consumer responses to such measures have had a material and adverse impact on numerous aspects of our business, including customer demand for our services and solutions in all regions of our International segment. In certain countries in our less developed regions, many of our customers are unable to operate as effectively or at all in a remote work-from-home environment, consumers are less able to transact online, and government stimulus efforts have generally been less than in the United States, all of which adversely impacted revenue in these regions. Our Canada region results were more in line with our United States businesses, while the other International regions lagged behind. While we continue to see improvements in demand for our services in the markets where we operate since the low point in April 2020, including ongoing improvements through the fourth quarter 2020, the impact of COVID-19, including government measures and business and consumer responses to such measures, may continue to have a material adverse impact on our International segment for an uncertain period of time.

For 2019, International revenue increased $151.1 million, or 32.0%, compared with 2018. The increase was due primarily to a 15.5% increase from our acquisition of Callcredit and higher local currency revenue in all regions from increased volumes, partially offset by a decrease of 4.8% from the impact of weakening foreign currencies.

*Canada:* For 2020, Canada revenue increased $3.9 million, or 3.7%, compared with 2019. The increase was due primarily to higher local currency revenue from increased volumes including new product initiatives, partially offset by a decrease from the impact of COVID-19 primarily in the second and third quarters, and a decrease of less than 1.0% from the impact of weakening foreign currencies.

For 2019, Canada revenue increased $8.1 million, or 8.4%, due primarily to higher local currency revenue from increased volumes including new product initiatives, partially offset by a decrease of 2.5% from the impact of weakening foreign currencies.

*Latin America:* For 2020, Latin America revenue decreased $17.7 million, or 17.0%, compared with 2019. The decrease was due primarily to a decrease in local currency revenue as a result of COVID-19 primarily in the second, third and fourth quarters, and a decrease of 11.5% from the impact of weakening foreign currencies, partially offset by higher local currency revenue from increased volumes including new product initiatives in the first quarter.

For 2019, Latin America revenue increased $2.0 million, or 1.9%, due primarily to higher local currency revenue from increased volumes including new product initiatives, partially offset by a decrease of 7.5% from the impact of weakening foreign currencies.

*United Kingdom:* For 2020, United Kingdom revenue decreased $3.6 million, or 1.9%, compared with 2019. The decrease was due primarily to a decrease in local currency revenue as a result of COVID-19 primarily in the second, third and fourth quarters, partially offset by higher local currency revenue from increased volumes including new product initiatives in the first quarter and an increase of 0.7% from the impact of strengthening foreign currencies.

For 2019, United Kingdom revenue from continuing operations was $186.7 million, compared with $71.3 million in 2018. All of our revenue in the United Kingdom is attributable to Callcredit. We acquired Callcredit on June 19, 2018, which obscures the comparability of our results between periods.

*Africa:* For 2020, Africa revenue decreased $12.2 million, or 20.0%, due primarily to a decrease in local currency revenue as a result of COVID-19 primarily in the second, third and fourth quarters, and a decrease of 10.1% from the impact of weakening foreign currencies, partially offset by higher local currency revenue from increased volumes including new product initiatives in the first quarter.

For 2019, Africa revenue decreased $3.0 million, or 4.7%, compared with 2018, due primarily to a decrease of 8.9% from the impact of weakening foreign currencies, partially offset by an increase in local currency revenue from increased volumes including new product initiatives.

*India:* For 2020, India revenue decreased $8.1 million, or 7.5%, due primarily to a decrease in local currency revenue as a result of COVID-19 primarily in the second and third quarters, and a decrease of 4.5% from the impact of weakening foreign currencies, partially offset by an increase in local currency revenue from increased volumes including new product initiatives in the first and fourth quarters.

For 2019, India revenue increased $26.3 million, or 32.1%, due primarily to higher local currency revenue from increased volumes including new product initiatives, partially offset by a decrease of 4.3% from the impact of weakening foreign currencies.

*Asia Pacific:* For 2020, Asia Pacific revenue decreased $3.0 million, or 5.0%, due primarily to a decrease in local currency revenue as a result of COVID-19 primarily in the second, third and fourth quarters, partially offset by an increase of 1.5% from the impact of strengthening foreign currencies and an increase in local currency revenue from increased volumes including new product initiatives in the first quarter.

For 2019, Asia Pacific revenue increased $2.4 million, or 4.3%, to higher local currency revenue from increased volumes including new product initiatives, partially offset by lower direct-to-consumer revenue in Hong Kong. The impact of foreign currencies did not have a significant impact in 2019.

*Consumer Interactive Segment*

For 2020, Consumer Interactive revenue increased $15.3 million compared with 2019, due primarily to an increase in revenue from our direct channel. The impact of COVID-19, including government measures and business and consumer responses to such measures, may have a material and adverse impact on our Consumer Interactive segment for an uncertain period of time, particularly in our indirect channel.

For 2019, Consumer Interactive revenue increased $21.9 million, compared with 2018, due primarily to an increase in revenue from both our direct and indirect channels, partially offset by a decrease in incremental credit monitoring revenue due to a breach at a competitor.

***Operating Expenses***

Operating expenses for the periods reported were as follows:

| (dollars in millions) | Twelve months ended December 31, 2020 | 2019 | 2018 | Change 2020 vs. 2019 $ | % | Change 2019 vs. 2018 $ | % |
|---|---|---|---|---|---|---|---|
| Cost of services | $ 920.4 | $ 874.1 | $ 790.1 | $ 46.4 | 5.3% | $ 83.9 | 10.6% |
| Selling, general and administrative | 860.3 | 812.1 | 707.7 | 48.2 | 5.9% | 104.5 | 14.8% |
| Depreciation and amortization | 367.9 | 362.1 | 306.9 | 5.8 | 1.6% | 55.2 | 18.0% |
| Total operating expenses | $2,148.6 | $2,048.3 | $1,804.7 | $100.4 | 4.9% | $243.6 | 13.5% |

*As a result of displaying amounts in millions, rounding differences may exist in the table above.*

*Cost of Services*

For 2020, cost of services increased $46.4 million compared with 2019. The increase was due primarily to:

- an increase in labor costs in our U.S. Markets segment, primarily due to key strategic growth initiatives;
- an increase in product costs in our U.S. Markets and Consumer Interactive segments; and
- an increase in costs from our accelerated technology investment,

partially offset by:

- a decrease in travel and entertainment expenses due to travel restrictions and shelter in place orders related to COVID-19; and
- the impact of weakening foreign currencies on the expenses of our International segment.

For 2019, cost of services increased $83.9 million compared with 2018. The increase was due primarily to:

- operating and integration-related costs relating to the business acquisitions in our U.S. Markets and International segments; and
- an increase in product costs resulting from the increase in revenue, primarily in our U.S. Markets segment;

partially offset by:

- the impact of weakening foreign currencies on the expenses of our International segment

*Selling, General and Administrative*

For 2020, selling, general and administrative expenses increased $48.2 million compared with 2019. The increase was due primarily to:

- an increase of $58.1 million for legal and regulatory matters primarily related to the Ramirez litigation;
- an increase in bad debt expense due to an increase in our estimated reserves including our current expected impact of COVID-19 primarily in our U.S. Markets and International segments;
- an increase in advertising costs, primarily in our Consumer Interactive segment; and
- an increase in costs from our accelerated technology investment;

partially offset by:

- a decrease in travel and entertainment expenses due to travel restrictions and shelter in place orders related to COVID-19;
- a decrease in stock-based compensation from lower expected achievement on certain performance-based awards due to COVID-19; and
- the impact of overall weakening foreign currencies on the expenses of our International segment.

For 2019, selling, general and administrative expenses increased $104.5 million compared with 2018. The increase was due primarily to:

- operating and integration-related costs relating to the business acquisitions in our U.S. Markets and International segments;
- an increase in labor and professional services costs as we continue to invest in key strategic growth initiatives; and
- an increase in advertising costs, primarily in our Consumer Interactive segment;

partially offset by:

- a decrease in litigation costs in our U.S. Markets segment; and
- the impact of weakening foreign currencies on the expenses of our International segment.

*Depreciation and amortization*

For 2020, depreciation and amortization increased $5.8 million compared with 2019, due primarily to recent acquisitions of tangible and intangible assets, partially offset by a decrease in amortization related to certain intangible assets from our 2012 change in control transaction that have become fully amortized.

For 2019, depreciation and amortization increased $55.2 million compared with 2018, primarily in our International and U.S. Markets segments, primarily due to fixed assets and intangible assets acquired with our 2018 and 2019 business acquisitions.

### *Adjusted EBITDA and Adjusted EBITDA margin*

| (dollars in millions) | Twelve months ended December 31, 2020 | 2019 | 2018 | 2020 vs. 2019 $ Change | 2020 vs. 2019 % Change | 2019 vs. 2018 $ Change | 2019 vs. 2018 % Change |
|---|---|---|---|---|---|---|---|
| Adjusted Revenue[1]: | | | | | | | |
| U.S. Markets gross Adjusted Revenue | $1,696.6 | $1,610.0 | $1,446.7 | $ 86.7 | 5.4% | $163.3 | 11.3% |
| International gross Adjusted Revenue | 582.7 | 629.1 | 498.5 | (46.4) | (7.4)% | 130.6 | 26.2% |
| Consumer Interactive gross Adjusted Revenue | 513.1 | 497.8 | 475.8 | 15.3 | 3.1% | 21.9 | 4.6% |
| Total gross Adjusted Revenue | 2,792.5 | 2,736.8 | 2,421.0 | 55.7 | 2.0% | 315.8 | 13.0% |
| Less: intersegment revenue eliminations | (75.9) | (74.8) | (75.7) | (1.1) | nm | 0.9 | nm |
| Consolidated Adjusted Revenue | $2,716.6 | $2,662.0 | $2,345.3 | $ 54.6 | 2.1% | $316.7 | 13.5% |
| Adjusted EBITDA[1]: | | | | | | | |
| U.S. Markets | $ 682.5 | $ 664.2 | $ 576.1 | $ 18.3 | 2.8% | $ 88.1 | 15.3% |
| International | 219.8 | 258.1 | 193.0 | (38.3) | (14.8)% | 65.1 | 33.7% |
| Consumer Interactive | 247.6 | 248.4 | 237.6 | (0.8) | (0.3)% | 10.8 | 4.6% |
| Corporate | (105.0) | (111.8) | (89.8) | 6.8 | 6.1% | (22.0) | (24.4)% |
| Consolidated Adjusted EBITDA | $1,044.9 | $1,058.9 | $ 916.9 | $(14.1) | (1.3)% | $142.0 | 15.5% |
| Adjusted EBITDA margin: | | | | | | | |
| U.S. Markets | 40.2% | 41.3% | 39.8% | | (1.0)% | | 1.4% |
| International | 37.7% | 41.0% | 38.7% | | (3.3)% | | 2.3% |
| Consumer Interactive | 48.3% | 49.9% | 49.9% | | (1.7)% | | —% |
| Consolidated Adjusted EBITDA margin | 38.5% | 39.8% | 39.1% | | (1.3)% | | 0.7% |

*nm: not meaningful*

*As a result of displaying amounts in millions, rounding differences may exist in the table above.*

1. See the reconciliation of net income attributable to TransUnion to Consolidated Adjusted EBITDA and the reconciliation of segment revenue to segment Adjusted Revenue in the "Key Performance Measures" section at the beginning of our discussion about our Results of Operations. See the "Revenue" table above for details of the intersegment revenue eliminations by segment. Segment Adjusted EBITDA margins are calculated using segment gross Adjusted Revenue and segment Adjusted EBITDA. Consolidated Adjusted EBITDA margin is calculated using consolidated Adjusted Revenue and consolidated Adjusted EBITDA.

For 2020, consolidated Adjusted EBITDA decreased $14.1 million due primarily to:

- an increase in expense for legal and regulatory matters as discussed above;
- a decrease in revenue in our International segment;
- an increase in labor costs in our U.S. Markets segment, as we invested in key strategic growth initiatives;
- an increase in product costs in our U.S. Markets and Consumer Interactive segments; and
- an increase in advertising costs in our Consumer Interactive segment,

partially offset by:

- an increase in revenue in our U.S. Markets and Consumer Interactive segments;
- a decrease in travel and entertainment expenses due to travel restrictions and shelter in place orders related to COVID-19; and
- the impact of weakening foreign currencies on the expenses of our International segment.

For 2020, Adjusted EBITDA margins for the U.S. Markets segment decreased due primarily to the impact of COVID-19 on revenue in the Emerging Verticals, an increase in expense for legal and regulatory matters and an increase in labor costs primarily due to key strategic growth initiatives, partially offset by improving market conditions in the mortgage line of business in the Financial Services Vertical and a decrease in travel and entertainment expenses.

Adjusted EBITDA margins for the International segment decreased due primarily to the impact of COVID-19 on revenue, partially offset by a decrease in travel and entertainment expenses and the impact of weakening foreign currencies on the expenses of our International segment.

Adjusted EBITDA margins for the Consumer Interactive segment decreased due primarily to an increase in advertising costs and variable product costs, partially offset by an increase in revenue.

For 2019, consolidated Adjusted EBITDA increased $142.0 million due primarily to:

- an increase in revenue in all of our segments, including revenue from recent acquisitions; and
- a decrease in litigation costs in our U.S. Markets segment;

partially offset by:

- an increase in operating and integration-related costs relating to the business acquisitions in our U.S. Markets and International segments;
- an increase in product costs resulting from the increase in revenue, primarily in our U.S. Markets segments;
- an increase in labor costs, primarily in our U.S. Markets and International segments and an increase in labor costs and professional services in Corporate, as we continue to invest in key strategic growth initiatives; and
- an increase in advertising costs, primarily in our Consumer Interactive segment.

For 2019, Adjusted EBITDA margins for the U.S. Markets segment increased due primarily to the increase in revenue and decrease in litigation costs, partially offset by the increase in operating and integration-related costs of recent business acquisitions, an increase in product costs resulting from the increase in revenue, and an increase in labor costs.

Adjusted EBITDA margins for the International segment increased due primarily to the strong increase in revenue in India and higher margins in our United Kingdom region in 2019 compared with 2018, partially offset by the increase in operating and integration-related costs of recent business acquisitions, an increase in labor costs, and an increase in product costs resulting from the increase in revenue.

Adjusted EBITDA margins for the Consumer Interactive segment stayed relatively consistent year over year, due primarily to the increase in revenue partially offset by the increase in advertising costs and increase in product costs resulting from the increase in revenue.

### *Non-Operating Income and Expense*

| (dollars in millions) | Twelve months ended December 31, 2020 | 2019 | 2018 | Change 2020 vs. 2019 $ | % | 2019 vs. 2018 $ | % |
|---|---|---|---|---|---|---|---|
| Interest expense | $(126.3) | $(173.6) | $(137.5) | $47.4 | 27.3% | $(36.2) | (26.3)% |
| Interest income | 5.6 | 7.5 | 5.5 | (1.9) | (25.7)% | 2.1 | 37.9% |
| Earnings from equity method investments | 8.9 | 13.2 | 9.9 | (4.3) | (32.4)% | 3.3 | 32.8% |
| Other income and (expense), net: | | | | | | | |
| Acquisition fees | (8.3) | (2.6) | (29.3) | (5.7) | nm | 26.7 | 91.1% |
| Loan Fees | (2.0) | (17.0) | (13.6) | 15.0 | 88.3% | (3.4) | (25.2)% |
| Dividends from cost method investments | 1.4 | 1.3 | 1.1 | 0.1 | 6.3% | 0.2 | 20.8% |
| Other income (expense), net | 8.5 | 3.9 | (5.2) | 4.6 | nm | 9.0 | nm |
| Total other income and expense, net | (0.4) | (14.4) | (46.9) | 14.0 | nm | 32.5 | nm |
| Non-operating income and expense | $(112.2) | $(167.3) | $(169.0) | $55.2 | (33.0)% | $ 1.7 | 1.0% |

*nm: not meaningful*

*As a result of displaying amounts in millions, rounding differences may exist in the table above.*

For the twelve months ended December 31, 2020, interest expense decreased $47.4 million compared with 2019, due primarily to the impact of the decrease in the average interest rate and a decrease in our average outstanding principal balance. We refinanced our Senior Secured Credit Facility in late 2019 resulting in a lower interest rate. During 2020, we prepaid $150.0 million of our Senior Secured Term Loans and in the second half of 2019, we prepaid $340.0 million of our Senior Secured Term Loans, which impacts the comparability of interest expense between periods. Our future interest expense could be materially impacted by changes in our variable interest rates caused by COVID-19 or other macro-economic factors, to the extent our variable rate debt is not hedged with fixed rate debt. See Part II, Item 8, "Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements," Note 10, "Debt," for additional information about our debt.

For the twelve months ended December 31, 2019, interest expense increased $36.2 million compared with 2018 due primarily to the impact of the increase in our average outstanding principal balance as a result of funding our business acquisitions in June 2018.

Acquisition fees represent costs we have incurred for various acquisition-related efforts. For 2020, acquisition fees included costs related to our acquisitions of Tru Optik and Signal Digital and costs of our other acquisition efforts. For 2019, acquisition fees included costs related to our acquisition of TruSignal and costs of our other acquisition efforts. For 2018, acquisition fees included costs related to our acquisition of Callcredit, iovation, HPS, and Rubixis, and costs of our other acquisition efforts.

For 2019, loan fees included $13.0 million of refinancing fees and other net costs expensed as a result of refinancing our Senior Secured Term Loan late in 2019, $2.0 million of deferred loan fees written off as a result of prepaying our debt and $2.0 million of other fees. For 2018, loan fees included $12.0 million of fees related to the additional debt we incurred to fund our recent business acquisitions and $1.6 million of other fees. See Part II, Item 8, "Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements," Note 10, "Debt," for additional information on these loan fees and our refinancing activities.

For 2020, other income (expense), net included an $8.1 million remeasurement gain on notes receivable that were converted into equity upon acquisition and consolidation of an entity; a $2.9 million recovery from the Fraud Incident net of additional administrative expenses; a $2.5 million gain on a Cost Method investment resulting from an observable price change for a similar investment of the same issuer; a ($4.8) million loss on the impairment of a Cost Method investment, currency remeasurement, hedge gains and losses, and other miscellaneous non-operating income and expense items.

For 2019, other income (expense), net included a $(31.2) million gain on a Cost Method Investment resulting from an observable price change for a similar investment of the same issuer, $17.8 million of expenses associated with the Fraud Incident, a $10.0 million loss on the impairment of certain Cost Method investments, a $3.7 million loss on assets of a small business in our United Kingdom region that are classified as held-for-sale, currency remeasurement, hedge gains and losses, and other miscellaneous non-operating income and expense items.

### *Provision for Income Taxes*

For 2020, we reported a 22.0% effective tax rate, which is higher than the 21.0% U.S. federal corporate statutory rate due primarily to an increase in state taxes, valuation allowances on foreign tax credit carryforwards and uncertain tax positions including related interest and penalties, partially offset by excess tax benefits on stock based compensation and foreign taxes in jurisdictions, which have tax rates lower than the U.S. federal corporate statutory rate.

For 2019, we reported a 19.0% effective tax rate, which is lower than the 21.0% U.S. federal corporate statutory rate due primarily to excess tax benefits on stock based compensation, partially offset by U.S federal tax on foreign earnings and foreign taxes in jurisdictions, which have tax rates that are higher than the U.S. federal corporate statutory rate.

For 2018, we reported a 15.9% effective tax rate, which is lower than the 21.0% U.S. federal statutory rate due primarily to the one-time impacts resulting from enactment of the Act in December 2017 and the excess tax benefits on stock-based compensation that were recorded to tax expense upon our adoption of ASU 2016-09 on January 1, 2017.

### *Significant Changes in Assets and Liabilities*

Total debt at December 31, 2020 compared with December 31, 2019, decreased because in addition to our required repayments, we made additional early prepayments of $150.0 million during the year ending December 31, 2020. Total debt at December 31, 2019 compared with December 31, 2018, decreased because in addition to our required repayments, we made additional early prepayments of $340.0 million during the year ending December 31, 2019. See “Recent Developments” above and Part II, Item 8 “Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements,” Note 10, “Debt,” for additional information.

## Liquidity and Capital Resources

### *Overview*

Our principal sources of liquidity are cash flows provided by operating activities, cash and cash equivalents on hand, and our senior secured revolving line of credit. Our principal uses of liquidity are working capital, capital expenditures, debt service and other capital structure obligations, business acquisitions, and other general corporate purposes. We believe our cash on hand, cash generated from operations, and funds available under the senior secured revolving line of credit will be sufficient to fund our planned capital expenditures, debt service and other capital structure obligations, business acquisitions and operating needs for the foreseeable future. Since mid-March 2020, the COVID-19 pandemic, widespread measures implemented to contain its effects and business and consumer responses to such measures have had a material and adverse impact on numerous aspects of our business, including customer demand for our services and solutions in all of our segments, and our consolidated financial statements. At this time, however, we do not expect the impact of COVID-19 to affect our ability to fund our operating needs for the foreseeable future. Our ability to maintain adequate liquidity for our operations in the future is dependent upon a number of factors, including our revenue, macroeconomic conditions, the length and severity of business disruptions caused by COVID-19, our ability to contain costs, including capital expenditures, and to collect accounts receivable, and various other factors, many of which are beyond our control. We will continue to monitor our liquidity position and may elect to raise funds through debt or equity financing in the future to fund operations, significant investments or acquisitions that are consistent with our growth strategy. In addition, if the pandemic continues to create significant disruptions in the credit or financial markets, or impacts our credit ratings, it could adversely affect our ability to access capital on favorable terms or at all. We may, however, elect to raise funds through debt or equity financing in the future to fund significant investments or acquisitions that are consistent with our growth strategy.

Cash and cash equivalents totaled $493.0 million and $274.1 million at December 31, 2020 and 2019, respectively, of which $232.0 million and $176.5 million was held outside the United States. As of December 31, 2020, we had no outstanding balance under the Senior Secured Revolving Credit Facility and $0.1 million of outstanding letters of credit, and could have borrowed up to the remaining $299.9 million available.

We also have the ability to request incremental loans on the same terms under the existing senior secured credit facility up to the greater of an additional $1,000.0 million and 100% of Consolidated EBITDA. Consolidated EBITDA is reduced to the extent that the senior secured net leverage ratio is above 4.25-to-1. In addition, so long as the senior secured net leverage ratio does not exceed 4.25-to-1, we may incur additional incremental loans, subject to certain additional conditions and commitments by existing or new lenders to fund any additional borrowings.

With certain exceptions, the Senior Secured Credit Facility obligations are secured by a first-priority security interest in substantially all of the assets of Trans Union LLC, including its investment in subsidiaries. The Senior Secured Credit Facility contains various restrictions and nonfinancial covenants, along with a senior secured net leverage ratio test. The nonfinancial covenants include restrictions on dividends, investments, dispositions, future borrowings and other specified payments, as well as additional reporting and disclosure requirements. The senior secured net leverage test must be met as a condition to incur additional indebtedness, make certain investments, and may be required to make certain restricted payments. The senior secured net leverage ratio must not exceed 5.5-to-1 at any such measurement date.

The balance retained in cash and cash equivalents is consistent with our short-term cash needs and investment objectives. The Company may be required to make additional principal payments on the Senior Secured Term Loan B based on excess cash flows of the prior year, as defined in the agreement. There were no excess cash flows for 2020 and therefore no additional payment will be required in 2021. Additional payments based on excess cash flows could be due in future years. See Part II, Item 8, “Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements,” Note 10, “Debt,” for additional information about our debt.

During 2020, we prepaid $150.0 million towards our Senior Secured Term Loans, funded from our cash on hand.

During 2020, the board of directors declared four quarterly dividends of $0.075 per share each quarter, of which we paid $57.6 million.

Any determination to pay dividends in the future will be at the discretion of our board of directors and will depend upon results of operations, financial condition, contractual restrictions, restrictions imposed by applicable law and other factors our board of directors deems relevant. We currently have capacity and intend to continue to pay a quarterly dividend, subject to approval by our board. While we are comfortable paying the dividend at this time, if circumstances further deteriorate, we would consider recommending that our board temporarily reduce or suspend our dividend.

During the first quarter of 2020, 0.9 million outstanding employee restricted stock units vested and became taxable to the employees. The employees used 0.3 million shares of the vested stock to satisfy their payroll tax withholding obligations in a net share settlement arrangement whereby the employees received 0.6 million of the shares and gave TransUnion the remaining 0.3 million shares that we have recorded as treasury stock. We remitted cash equivalent to the $32.1 million vest date value of the treasury stock to the respective governmental agencies in settlement of the employee withholding tax obligations. On occasion, as other stock units vest or stock options are exercised throughout the year, employees use shares of stock to satisfy their payroll tax withholding obligations in a net settlement arrangement and we remit the equivalent value of those shares to the respective governmental agencies.

On February 13, 2017, our board of directors authorized the repurchase of up to $300.0 million of our common stock over the next three years. Our board of directors removed the three-year time limitation on February 8, 2018. During 2017, we repurchased $133.5 million of our stock and can repurchase up to the additional $166.5 million authorized.

We have no obligation to repurchase additional shares, and the timing, actual number and value of the shares that are repurchased, if any, will be at the discretion of management and will depend on a number of factors, including market conditions, the cost of repurchasing shares, the availability of alternative investment opportunities, liquidity, and other factors deemed appropriate. Repurchases may be suspended, terminated or modified at any time for any reason. Any repurchased shares will have the status of treasury shares and may be used, if and when needed, for general corporate purposes. While the existing share repurchase program remains authorized by the board of directors, given the uncertainties arising from the COVID-19 pandemic, we do not intend to repurchase additional shares in the short term. We may resume share repurchases in the future at any time, depending upon market conditions, our capital needs and other factors.

### *Sources and Uses of Cash*

| | Twelve months ended December 31, | | | Change | |
|---|---|---|---|---|---|
| **(dollars in millions)** | **2020** | **2019** | **2018** | **2020 vs. 2019** | **2019 vs. 2018** |
| Cash provided by operating activities | $ 787.4 | $ 776.7 | $ 555.7 | $ 10.7 | $ 221.0 |
| Cash used in investing activities | (267.2) | (203.9) | (2,017.7) | (63.3) | 1,813.8 |
| Cash (used in) provided by financing activities | (296.9) | (486.7) | 1,540.2 | 189.8 | (2,026.9) |
| Effect of exchange rate changes on cash and cash equivalents | (4.4) | 0.6 | (6.6) | (5.0) | 7.2 |
| Net change in cash and cash equivalents | $ 218.9 | $ 86.7 | $ 71.6 | $132.2 | $ 15.1 |

*Operating Activities*

For 2020, the increase in cash provided by continuing operations was due primarily to a decrease in interest expense and a decrease in working capital, partially offset by a decrease in operating performance as a result of COVID-19. For 2019, the increase in cash provided by operating activities was due primarily to the increase in operating income excluding depreciation and amortization and non-cash items, partially offset by an increase in interest expense resulting from the increase in outstanding debt.

*Investing Activities*

For 2020, the increase in cash used in investing activities was due primarily to proceeds from the disposal of discontinued operations in 2019 that did not recur in 2020, an increase in cash used for acquisitions and an increase in capital expenditures, partially offset by an increase in proceeds from the sale of investments in 2020. For 2019, the decrease in cash used in investing activities was due primarily to significantly lower cash used for acquisitions and proceeds from the sale of the Callcredit discontinued operations, partially offset by an increase in capital expenditures.

*Financing Activities*

For 2020, the decrease in cash used in financing activities was due primarily to a decrease in debt prepayments, $150 million in 2020 compared with $340 million in 2019. For 2019, the increase in cash used for financing activities was due primarily to the loan proceeds borrowed in 2018 to fund our acquisitions, partially offset by $340.0 million of prepayments made on our outstanding debt in 2019 compared with $60.0 million in 2018, $39.2 million of cash used to pay employee withholding taxes on restricted stock that vested during the year that we have recorded as treasury stock, and one additional quarterly dividend payment made in 2019 compared with 2018.

***Capital Expenditures***

We make capital expenditures to grow our business by developing new and enhanced capabilities, to increase the effectiveness and efficiency of the organization and to reduce risks. We make capital expenditures for product development, disaster recovery, security enhancements, regulatory compliance, and the replacement and upgrade of existing equipment at the end of its useful life.

For 2020, cash paid for capital expenditures increased $15.6 million to $214.1 million. For 2019, cash paid for capital expenditures increased $18.4 million to $198.5 million.

***Debt***

*Hedge*

On March 10, 2020, we entered into two tranches of interest rate swap agreements with various counter-parties that effectively fix our LIBOR exposure on a portion of our Senior Secured Term Loans or similar replacement debt. The first tranche commenced on June 30, 2020, and expires on June 30, 2022, with a current aggregate notional amount of $1,140.0 million that amortizes each quarter. The first tranche requires TransUnion to pay fixed rates varying between 0.5200% and 0.5295% in exchange for receiving a variable rate that matches the variable rate on our loans. The second tranche commences on June 30, 2022, and expires on June 30, 2025, with a current aggregate notional amount of $1,110.0 million that amortizes each quarter after it commences. The second tranche requires TransUnion to pay fixed rates varying between 0.9125% and 0.9280% in exchange for receiving a variable rate that matches the variable rate on our loans. We have designated these swap agreements as cash flow hedges.

On December 17, 2018, we entered into interest rate swap agreements with various counter-parties that effectively fix our LIBOR exposure on a portion of our Senior Secured Term Loans or similar replacement debt, which is currently fixed at 2.702% and 2.706%. We have designated these swap agreements as cash flow hedges. The current aggregate notional amount under these agreements is $1,410.0 million, decreasing each quarter until the second agreement terminates on December 30, 2022.

*Effect of certain debt covenants*

A breach of any of the covenants under the agreements governing our debt could limit our ability to borrow funds under the senior secured revolving line of credit and could result in a default under the senior secured credit facility. Upon the occurrence of an event of default under the senior secured credit facility, the lenders could elect to declare all amounts then outstanding to be immediately due and payable, and the lenders could terminate all commitments to extend further credit. If we were unable to repay the amounts declared due, the lenders could proceed against any collateral granted to them to secure that indebtedness.

With certain exceptions, the senior secured credit facility obligations are secured by a first-priority security interest in substantially all of the assets of Trans Union LLC, including its investment in subsidiaries. The Senior

Secured Credit Facility contains various restrictions and nonfinancial covenants, along with a senior secured net leverage ratio test. The nonfinancial covenants include restrictions on dividends, investments, dispositions, future borrowings and other specified payments, as well as additional reporting and disclosure requirements. The senior secured net leverage test must be met as a condition to incur additional indebtedness, make certain investments, and may be required to make certain restricted payments. The senior secured net leverage ratio must not exceed 5.5-to-1 at any such test date. Under the terms of the Senior Secured Credit Facility, TransUnion may make dividend payments up to the greater of $75 million or 7.5% of Consolidated EBITDA per year, or an unlimited amount provided that no default or event of default exists and so long as the total net leverage ratio does not exceed 4.75-to-1. As of December 31, 2020, we were in compliance with all debt covenants.

Our ability to meet our liquidity needs or to pay dividends on our common stock depends on our subsidiaries' earnings, the terms of their indebtedness, and other contractual restrictions. Trans Union LLC, the borrower under the senior secured credit facility, is not permitted to declare any dividend or make any other distribution subject to certain exceptions, including compliance with a fixed charge coverage ratio and a basket that depends on TransUnion Intermediate Holding, Inc.'s consolidated net income.

For additional information about our debt and hedge, see Part II, Item 8, "Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements," Note 10, "Debt."

***Contractual Obligations***

Consolidated future minimum payments for noncancelable operating leases, purchase obligations and debt repayments as of December 31, 2020, are payable as follows:

| (in millions) | Operating leases | Purchase obligations and other | Debt repayments | Loan fees and interest payments | Total |
|---|---|---|---|---|---|
| 2021 | $18.5 | $322.1 | $ 55.5 | $— | $ 396.1 |
| 2022 | 16.9 | 53.3 | 84.3 | — | 154.5 |
| 2023 | 14.7 | 24.3 | 83.6 | — | 122.6 |
| 2024 | 11.3 | 12.6 | 1,003.5 | — | 1,027.4 |
| 2025 | 8.8 | 10.3 | 26.0 | — | 45.1 |
| Thereafter | 13.9 | 0.3 | 2,219.0 | — | 2,233.2 |
| Totals | $84.1 | $422.9 | $3,471.9 | $— | $3,978.9 |

Purchase obligations and other includes $193.2 million of trade accounts payable that were included in our balance sheet as of December 31, 2020. Purchase obligations and other includes commitments for outsourcing services, royalties, data licenses, maintenance and other operating expenses. Loan fees and interest payments are estimates based on the interest rates in effect at December 31, 2020, and the contractual principal paydown schedule, excluding any excess cash flow prepayments that may be required. See Part II, Item 8, "Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements," Note 10, "Debt," and Note 19, "Commitments," for additional information about our interest payments and purchase obligations.

**Off-Balance Sheet Arrangements**

As of December 31, 2020, we had no off-balance sheet arrangements as defined in Item 303(a)(4) of Regulation S-K.

**Application of Critical Accounting Estimates**

We prepare our consolidated financial statements in conformity with generally accepted accounting principles ("GAAP"). See Part II, Item 8, "Financial Statements and Supplementary Data—Notes to Consolidated Financial

Statements” Note 1, “Significant Accounting and Reporting Policies,” for additional information about our significant accounting and reporting policies that require us to make certain judgements and estimates in reporting our operating results and our assets and liabilities. The following paragraphs describe the accounting policies that require significant judgment and estimates due to inherent uncertainty or complexity.

***Goodwill***

As of December 31, 2020, our consolidated balance sheet included goodwill of $3,461.5 million. As of December 31, 2020, we did not have any other indefinite-lived intangible assets. We conduct an impairment test in the fourth quarter of each year, or more frequently if events or circumstances indicate that the carrying value of goodwill may be impaired.

We have the option to first perform a qualitative analysis to determine if it is more likely than not that the fair value of a reporting unit is less than its carrying value. If the qualitative analysis indicates that an impairment is more likely than not for any reporting unit, we perform a quantitative impairment analysis for that reporting unit. We have the option to bypass the qualitative analysis for any reporting unit and proceed directly to performing a quantitative analysis.

Our quantitative analysis consists of a fair value calculation for each reporting unit that combines an income approach, using the discounted cash flow method, and a market approach, using the guideline public company method. The quantitative impairment analysis requires the application of a number of significant assumptions, including estimates of future revenue growth rates, EBITDA margins, discount rates, and market multiples. The projected future revenue and EBITDA margins, and the resulting projected cash flows of each reporting unit is based on internal operating plans reviewed by management, extrapolated over the forecast period. The discount rate for each reporting unit is based on the weighted average cost of capital for the reporting unit. Market multiples are based on the Guideline Public Company Method using comparable publicly traded company multiples of earnings before interest, taxes, and depreciation and amortization for a group of benchmark companies.

We believe the assumptions we use in our qualitative and quantitative analysis are reasonable and consistent with assumptions that would be used by other marketplace participants. In order to ensure the assumptions used in the analysis are reasonable, we compare the sum of the fair value of the reporting units to our market capitalization, to ensure it is within a reasonable range. However such assumptions are inherently uncertain, even more so in times of greater economic instability such as during this current COVID-19 pandemic, and a change in assumptions could change the estimated fair values of our reporting units and, therefore, future impairment charges could be required, which could be material to the consolidated financial statements.

In 2020, we elected to bypass the qualitative goodwill impairment analysis, and instead performed a quantitative goodwill impairment analysis for all reporting units. For each of our reporting units, the fair value exceeded the carrying value and no impairment was recorded. Further, a 10% decrease in the estimated cash flows or a 10% increase in the discount rate, combined with a 10% decrease in the market multiple would not result in an impairment for any of our reporting units. Our reporting units that have longer operating histories have greater headroom compared with reporting units that include significant recent acquisitions.

***Legal Contingencies***

In the ordinary course of business, we are routinely named as defendants in, or parties to, various legal actions and proceedings relating to our current or past business operations. These actions generally assert claims for violations of federal or state credit reporting, consumer protection or privacy laws, or common law claims related to the unfair treatment of consumers, and may include claims for substantial or indeterminate compensatory or punitive damages, or injunctive relief, and may seek business practice changes. We believe that most of these claims are either without merit or we have valid defenses to the claims, and we vigorously defend these matters or seek non-monetary or small monetary settlements, if possible. However, due to the uncertainties inherent in litigation, we cannot predict the outcome of each claim in each instance.

In the ordinary course of business, we also are subject to governmental and regulatory examinations, information-gathering requests, investigations and proceedings (both formal and informal), certain of which may result in adverse judgments, settlements, fines, penalties, injunctions or other relief. In connection with formal and informal inquiries by these regulators, we routinely receive requests, subpoenas and orders seeking documents, testimony, and other information in connection with various aspects of our activities.

In view of the inherent unpredictability of legal and regulatory matters, particularly where the damages sought are substantial or indeterminate or when the proceedings or investigations are in the early stages, we cannot determine with any degree of certainty the timing or ultimate resolution of legal and regulatory matters or the eventual loss, fines, penalties or, if any, that may result. We establish reserves for legal and regulatory matters when those matters present loss contingencies that are both probable and can be reasonably estimated. However, for certain matters, we are not able to reasonably estimate our exposure because damages have not been specified and (i) the proceedings are in early stages, (ii) there is uncertainty as to the likelihood of a class being certified or the ultimate size of the class, (iii) there is uncertainty as to the outcome of similar matters pending against our competitors, (iv) there are significant factual issues to be resolved, and/or (v) there are legal issues of a first impression being presented. The actual costs of resolving legal and regulatory matters, however, may be substantially higher than the amounts reserved for those matters, and an adverse outcome in certain of these matters could have a material adverse effect on our consolidated financial statements in particular quarterly or annual periods. During 2020, we accrued amounts for certain legal and regulatory matters for which losses were considered to be probable of occurring based on our best estimate of the most likely outcome. It is reasonably possible actual losses could be significantly different from our current estimates. In addition, there are some matters for which it is reasonably possible that a loss will occur, however we cannot estimate a range of the potential losses for these matters. Legal fees incurred in connection with ongoing litigation are considered a period cost and are expensed as incurred.

As of December 31, 2020 and 2019, we have accrued $76.0 million and $30.4 million, respectively, for anticipated claims. The accrued liabilities are included in other current liabilities in the consolidated balance sheets and the associated expenses are recorded in selling, general and administrative expenses in the consolidated statements of income.

See Part II, Item 8 “Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements,” Note 20, “Contingencies,” for further information.

***Income Taxes***

As of December 31, 2020, TransUnion’s consolidated balance sheet included noncurrent deferred tax liabilities of $396.8 million. Certain deferred tax assets, including net operating loss and foreign tax credit carryforwards, may be deducted from future taxable income in computing our federal income tax liability. Our deferred tax liability includes deferred tax assets and liabilities resulting from net operating loss and tax credit carryforwards, temporary differences, and unrecognized tax benefits for uncertain tax positions.

We have made certain judgments and estimates to determine various tax amounts recorded, including future tax rates, future taxable income, whether it is more likely than not a tax position will be sustained, and the amount of the unrecognized tax benefit to record. We have deferred tax assets related to loss and credit carryforwards of $130.1 million, net of valuation allowances of $65.7 million. Our estimate of the amount of the deferred tax asset we can realize requires significant assumptions about projected revenues and income that are impacted by future market and economic conditions. We believe the judgments and estimates used are reasonable, but events may arise that were not anticipated and the outcome of tax audits may differ significantly from what is expected.

### Recent Accounting Pronouncements

For information about recent accounting pronouncements and the potential impact on our consolidated financial statements, see Part II, Item 8, “Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements,” Note 1, “Significant Accounting and Reporting Policies.”

## ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

In the normal course of business we are exposed to market risk, primarily from changes in variable interest rates and foreign currency exchange rates, which could impact our results of operations and financial position. We manage the exposure to this market risk through our regular operating and financing activities. We may use derivative financial instruments, such as foreign currency and interest rate hedges, but only as a risk management tool and not for speculative or trading purposes.

### *Interest Rate Risk*

Our Senior Secured Credit Facility consists of senior secured term loans and a $300.0 million Senior Secured Revolving Line of Credit. Interest rates on these borrowings are based, at our election, on LIBOR or an alternate base rate, subject to floors, plus applicable margins based on applicable net leverage ratios. As of December 31, 2020, essentially all of our outstanding debt was variable-rate debt. As of December 31, 2020, our variable-rate debt had a weighted-average interest rate of 1.74% and a weighted-average life of 5.25 years. During 2020, a 10% change in the average LIBOR rates utilized in the calculation of our actual interest expense would have increased our interest expense by $2.3 million for the year.

On March 10, 2020, we entered into two tranches of interest rate swap agreements with various counter-parties that effectively fix our LIBOR exposure on a portion of our Senior Secured Term Loans or similar replacement debt. The first tranche commenced on June 30, 2020, and expires on June 30, 2022, with a current aggregate notional amount of $1,140.0 million that amortizes each quarter. The first tranche requires TransUnion to pay fixed rates varying between 0.5200% and 0.5295% in exchange for receiving a variable rate that matches the variable rate on our loans. The second tranche commences on June 30, 2022, and expires on June 30, 2025, with an initial aggregate notional amount of $1,110.0 million that amortizes each quarter after it commences. The second tranche requires TransUnion to pay fixed rates varying between 0.9125% and 0.9280% in exchange for receiving a variable rate that matches the variable rate on our loans. We have designated these swap agreements as cash flow hedges.

On December 17, 2018, we entered into interest rate swap agreements with various counter-parties that effectively fix our LIBOR exposure on a portion of our Senior Secured Term Loans or similar replacement debt, which is currently fixed at 2.702% and 2.706%. We have designated these swap agreements as cash flow hedges. The current aggregate notional amount under these agreements is $1,410.0 million, decreasing each quarter until the second agreement terminates on December 30, 2022.

Based on the amount of unhedged outstanding variable-rate debt, we have a material exposure to interest rate risk. In the future our exposure to interest rate risk may change due to changes in the amount borrowed, changes in interest rates, or changes in the amount we have hedged. Since the onset of the COVID-19 pandemic, LIBOR has dropped significantly, and may be more volatile in the future, which could materially impact our total interest expense due to the unhedged portion of our debt. The amount of our outstanding debt, and the ratio of fixed-rate debt to variable-rate debt, can be expected to vary as a result of future business requirements, market conditions or other factors.

See Part II, Item 8, “Financial Statements and Supplementary Data—Notes to Consolidated Financial Statements,” Note 10, “Debt,” for additional information about interest rates on our debt.

### *Foreign Currency Exchange Rate Risk*

A substantial majority of our revenue, expense and capital expenditure activities are transacted in U.S. dollars. However, we transact business in a number of foreign currencies, including British pounds sterling, the South African rand, the Canadian dollar, the Indian rupee, the Colombian peso and the Brazilian real. In reporting the results of our foreign operations, we benefit from a weaker U.S. dollar and are adversely affected by a stronger U.S. dollar relative to the foreign currencies.

We are required to translate the assets and liabilities of our foreign subsidiaries that are measured in foreign currencies at the applicable period-end exchange rate in our consolidated balance sheets. We are required to translate revenue and expenses at the average exchange rates prevailing during the year in our consolidated statements of income. The resulting translation adjustment is included in other comprehensive income, as a component of stockholders' equity. Transaction gains and losses that arise from exchange rate fluctuations on transactions denominated in a currency other than the functional currency are included in other income and expense as incurred.

In 2020, revenue attributable to our foreign operations was $582.7 million, and Adjusted EBITDA attributable to our foreign operations was $219.8 million. A 10% change in the value of the U.S. dollar relative to a basket of the currencies for all foreign countries in which we had operations during 2020 would have changed our revenue by $58.3 million and our Adjusted EBITDA by $22.0 million.

A 10% change in the value of the U.S. dollar relative to a basket of currencies for all foreign countries in which we had operations would not have had a significant impact on our 2020 realized foreign currency transaction gains and losses.

## ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

### Index to Financial Statements

**TransUnion:**

## Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of TransUnion

### *Opinions on the Financial Statements and Internal Control over Financial Reporting*

We have audited the accompanying consolidated balance sheet of TransUnion and its subsidiaries (the "Company") as of December 31, 2020, and the related consolidated statements of income, comprehensive income, stockholders' equity and cash flows for the year then ended, including the related notes and financial statement schedules listed in the index appearing under Item 15(a)(2) (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2020, and the results of its operations and its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on criteria established in Internal Control—Integrated Framework (2013) issued by the COSO.

### *Basis for Opinions*

The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on the Company's consolidated financial statements and on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audit of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinions.

### *Definition and Limitations of Internal Control over Financial Reporting*

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

***Critical Audit Matters***

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

*Goodwill Impairment Assessment –Reporting Unit Within the International Segment*

As described in Notes 1 and 4 to the consolidated financial statements, the Company's consolidated goodwill balance was $3,461.5 million as of December 31, 2020, of which $1,423.1 million was allocated to the International reportable segment. Management conducts an impairment test in the fourth quarter of each year, or more frequently if events or circumstances indicate that the carrying value of goodwill may be impaired. Management performed a quantitative impairment test for all reporting units. To determine the fair value of each reporting unit, management uses a combination of an income approach, using the discounted cash flow method, and a market approach, using the guideline public company method. For each reporting unit, management compares the fair value to its carrying value including goodwill. If the fair value of the reporting unit is less than its carrying value, management records an impairment charge based on that difference, up to the amount of goodwill recorded in that reporting unit. The quantitative impairment analysis requires the application of a number of significant assumptions by management, including estimates of future revenue growth rates, EBITDA margins, discount rates, and market multiples.

The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment of a reporting unit within the International segment is a critical audit matter are (i) the significant judgment by management when developing the fair value measurement of the reporting unit; (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating management's significant assumptions related to the estimates of future revenue growth rates, EBITDA margins, the discount rate, and market multiple; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's goodwill impairment assessment, including controls over the valuation of the reporting unit within the International segment. These procedures also included, among others (i) testing management's process for developing the fair value estimate; (ii) evaluating the appropriateness of the discounted cash flow method and guideline public company method; (iii) testing the completeness and accuracy of underlying data used in the fair value estimate; and (iv) evaluating the significant assumptions used by management related to the estimates of future revenue growth rates, EBITDA margins, the discount rate, and market multiple. Evaluating management's assumptions related to the estimates of future revenue growth rates and EBITDA margins involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the reporting unit; (ii) the consistency with market data; and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in the evaluation of the management's discounted cash flow method and guideline public company method, and the discount rate and market multiple assumptions.

/s/ PricewaterhouseCoopers LLP

Chicago, Illinois

February 16, 2021

We have served as the Company's auditor since 2020.

## Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of TransUnion and subsidiaries

### Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheet of TransUnion and subsidiaries (the Company) as of December 31, 2019, the related consolidated statements of income, comprehensive income, stockholders' equity and cash flows for each of the two years in the period ended December 31, 2019, and the related notes and financial statement schedules for each of the two years in the period ended December 31, 2019 listed in the Index at Item 15 (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

### Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

We served as the Company's auditor from 2005 to 2020.

/s/Ernst & Young LLP

Chicago, Illinois

February 18, 2020

## TRANSUNION AND SUBSIDIARIES
**Consolidated Balance Sheets**
(in millions, except per share data)

| | December 31, 2020 | December 31, 2019 |
|---|---|---|
| **Assets** | | |
| Current assets: | | |
| Cash and cash equivalents | $ 493.0 | $ 274.1 |
| Trade accounts receivable, net of allowance of $26.6 and $19.0 | 453.7 | 443.9 |
| Other current assets | 159.5 | 170.2 |
| Total current assets | 1,106.2 | 888.2 |
| Property, plant and equipment, net of accumulated depreciation and amortization of $548.9 and $454.4 | 223.2 | 219.0 |
| Goodwill | 3,461.5 | 3,377.8 |
| Other intangibles, net of accumulated amortization of $1,752.2 and $1,482.1 | 2,284.6 | 2,391.9 |
| Other assets | 236.1 | 236.3 |
| **Total assets** | $7,311.6 | $7,113.2 |
| **Liabilities and stockholders' equity** | | |
| Current liabilities: | | |
| Trade accounts payable | $ 193.2 | $ 176.2 |
| Short-term debt and current portion of long-term debt | 55.5 | 58.7 |
| Other current liabilities | 415.8 | 336.5 |
| Total current liabilities | 664.5 | 571.4 |
| Long-term debt | 3,398.7 | 3,598.3 |
| Deferred taxes | 396.8 | 439.1 |
| Other liabilities | 215.5 | 165.0 |
| **Total liabilities** | 4,675.5 | 4,773.8 |
| Stockholders' equity: | | |
| Common stock, $0.01 par value; 1.0 billion shares authorized at December 31, 2020 and December 31, 2019; 195.7 million and 193.5 million shares issued as of December 31, 2020 and December 31, 2019, respectively; and 190.5 million and 188.7 million shares outstanding as of December 31, 2020 and December 31, 2019, respectively | 2.0 | 1.9 |
| Additional paid-in capital | 2,088.1 | 2,022.3 |
| Treasury stock at cost; 5.2 and 4.8 million shares at December 31, 2020 and December 31, 2019, respectively | (215.2) | (179.2) |
| Retained earnings | 937.4 | 652.0 |
| Accumulated other comprehensive loss | (272.1) | (251.6) |
| Total TransUnion stockholders' equity | 2,540.2 | 2,245.4 |
| Noncontrolling interests | 95.9 | 94.0 |
| **Total stockholders' equity** | 2,636.1 | 2,339.4 |
| **Total liabilities and stockholders' equity** | $7,311.6 | $7,113.2 |

See accompanying notes to consolidated financial statements.

**TRANSUNION AND SUBSIDIARIES**
**Consolidated Statements of Income**
(in millions, except per share data)

| | Twelve Months Ended December 31, | | |
|---|---|---|---|
| | 2020 | 2019 | 2018 |
| **Revenue** | $2,716.6 | $2,656.1 | $2,317.2 |
| **Operating expenses** | | | |
| Cost of services (exclusive of depreciation and amortization below) | 920.4 | 874.1 | 790.1 |
| Selling, general and administrative | 860.3 | 812.1 | 707.7 |
| Depreciation and amortization | 367.9 | 362.1 | 306.9 |
| **Total operating expenses** | 2,148.6 | 2,048.3 | 1,804.7 |
| **Operating income** | 567.9 | 607.8 | 512.5 |
| **Non-operating income and (expense)** | | | |
| Interest expense | (126.3) | (173.6) | (137.5) |
| Interest income | 5.6 | 7.5 | 5.5 |
| Earnings from equity method investments | 8.9 | 13.2 | 9.9 |
| Other income and (expense), net | (0.4) | (14.4) | (46.9) |
| **Total non-operating income and (expense)** | (112.2) | (167.3) | (169.0) |
| **Income from continuing operations before income taxes** | 455.8 | 440.5 | 343.5 |
| **Provision for income taxes** | (100.2) | (83.9) | (54.5) |
| **Income from continuing operations** | 355.6 | 356.6 | 289.0 |
| **Discontinued operations, net of tax** | — | (4.6) | (1.5) |
| **Net income** | 355.6 | 352.0 | 287.5 |
| **Less: net income attributable to noncontrolling interests** | (12.4) | (5.1) | (10.9) |
| **Net income attributable to TransUnion** | $ 343.2 | $ 346.9 | $ 276.6 |
| | | | |
| **Income from continuing operations** | $ 355.6 | $ 356.6 | $ 289.0 |
| **Less: income from continuing operations attributable to noncontrolling interests** | (12.4) | (5.1) | (10.9) |
| **Income from continuing operations attributable to TransUnion** | 343.2 | 351.5 | 278.1 |
| **Discontinued operations, net of tax** | — | (4.6) | (1.5) |
| **Net income attributable to TransUnion** | $ 343.2 | $ 346.9 | $ 276.6 |
| **Basic earnings per common share from:** | | | |
| Income from continuing operations attributable to TransUnion | $ 1.81 | $ 1.87 | $ 1.51 |
| Discontinued operations, net of tax | — | (0.02) | (0.01) |
| Net Income attributable to TransUnion | $ 1.81 | $ 1.85 | $ 1.50 |
| **Diluted earnings per common share from:** | | | |
| Income from continuing operations attributable to TransUnion | $ 1.79 | $ 1.83 | $ 1.46 |
| Discontinued operations, net of tax | — | (0.02) | (0.01) |
| Net Income attributable to TransUnion | $ 1.79 | $ 1.81 | $ 1.45 |
| **Weighted-average shares outstanding:** | | | |
| Basic | 189.9 | 187.8 | 184.6 |
| Diluted | 192.2 | 191.8 | 190.9 |

See accompanying notes to consolidated financial statements.

**TRANSUNION AND SUBSIDIARIES**
**Consolidated Statements of Comprehensive Income**
(in millions)

| | Twelve Months Ended December 31, | | |
|---|---|---|---|
| | **2020** | **2019** | **2018** |
| **Net income** | $ 355.6 | $ 352.0 | $ 287.5 |
| **Other comprehensive income:** | | | |
| Foreign currency translation: | | | |
| Foreign currency translation adjustment | 8.9 | 66.1 | (148.9) |
| Benefit (expense) for income taxes | 0.8 | (0.5) | — |
| Foreign currency translation, net | 9.7 | 65.6 | (148.9) |
| Hedge instruments: | | | |
| Net change on interest rate cap | 4.1 | (11.0) | 7.6 |
| Net change on interest rate swap | (43.5) | (35.4) | (10.7) |
| Cumulative effect of adopting ASU 2017-12 | — | 1.0 | — |
| Benefit for income taxes | 9.5 | 11.5 | 0.8 |
| Hedge instruments, net | (29.9) | (33.9) | (2.3) |
| Available-for-sale securities: | | | |
| Net unrealized gain | 0.3 | — | — |
| Expense for income taxes | (0.1) | — | — |
| Available-for-sale securities, net | 0.2 | — | — |
| **Total other comprehensive (loss) income, net of tax** | (20.0) | 31.7 | (151.2) |
| **Comprehensive income** | 335.6 | 383.7 | 136.3 |
| **Less: comprehensive income attributable to noncontrolling interests** | (12.9) | (5.7) | (7.1) |
| **Comprehensive income attributable to TransUnion** | $ 322.7 | $ 378.0 | $ 129.2 |

See accompanying notes to consolidated financial statements.

**TRANSUNION AND SUBSIDIARIES**
**Consolidated Statements of Cash Flows**
(in millions)

| | Twelve Months Ended December 31, | | |
|---|---|---|---|
| | 2020 | 2019 | 2018 |
| **Cash flows from operating activities:** | | | |
| Net income | $ 355.6 | $ 352.0 | $ 287.5 |
| Add: loss from discontinued operations, net of tax | — | 4.6 | 1.5 |
| Income from continuing operations | 355.6 | 356.6 | 289.0 |
| Adjustments to reconcile net income to net cash provided by operating activities: | | | |
| Depreciation and amortization | 367.9 | 362.1 | 306.9 |
| Loss on debt financing transactions | — | 15.0 | 12.0 |
| Net loss/(gain) on investments in affiliated companies and assets of businesses held for sale | (7.5) | (17.5) | 1.5 |
| Deferred taxes | (35.3) | (22.5) | (69.0) |
| Stock-based compensation | 46.9 | 51.0 | 57.9 |
| Provision for losses on trade accounts receivable | 13.1 | 10.0 | 8.6 |
| Other | 5.9 | 6.5 | 7.9 |
| Changes in assets and liabilities: | | | |
| Trade accounts receivable | (23.6) | 7.3 | (113.8) |
| Other current and long-term assets | (0.7) | (26.5) | 17.1 |
| Trade accounts payable | 18.7 | 5.7 | 20.7 |
| Other current and long-term liabilities | 46.4 | 36.3 | 20.6 |
| **Cash provided by operating activities of continuing operations** | 787.4 | 784.0 | 559.4 |
| Cash used in operating activities of discontinued operations | — | (7.3) | (3.7) |
| **Cash provided by operating activities** | 787.4 | 776.7 | 555.7 |
| **Cash flows from investing activities:** | | | |
| Capital expenditures | (214.1) | (198.5) | (180.1) |
| Proceeds from sale/maturity of other investments | 90.6 | 35.9 | 24.3 |
| Purchases of other investments | (73.5) | (31.4) | (31.8) |
| Acquisitions and purchases of noncontrolling interests, net of cash acquired | (71.7) | (46.3) | (1,828.4) |
| Proceeds from disposals of assets held for sale, net of cash on hand | 1.6 | 40.3 | (0.4) |
| Other | (0.1) | (3.9) | (1.2) |
| **Cash used in investing activities of continuing operations** | (267.2) | (203.9) | (2,017.6) |
| Cash used in investing activities of discontinued operations | — | — | (0.1) |
| **Cash used in investing activities** | (267.2) | (203.9) | (2,017.7) |

**TRANSUNION AND SUBSIDIARIES**
**Consolidated Statements of Cash Flows**
(in millions)

| | Twelve Months Ended December 31, | | |
|---|---|---|---|
| | **2020** | **2019** | **2018** |
| **Cash flows from financing activities:** | | | |
| Proceeds from refinance of Senior Secured Term Loans | — | 3,750.0 | 1,800.0 |
| Payments from refinance of Senior Secured Term Loans | — | (3,759.1) | — |
| Proceeds from Senior Secured Revolving Line of Credit | — | — | 125.0 |
| Payments of Senior Secured Revolving Line of Credit | — | — | (210.0) |
| Repayments of debt | (208.8) | (389.0) | (114.3) |
| Debt financing fees | — | (11.2) | (33.8) |
| Proceeds from issuance of common stock and exercise of stock options | 22.9 | 24.4 | 26.2 |
| Dividends to shareholders | (57.6) | (56.8) | (41.6) |
| Distributions to noncontrolling interests | (10.9) | (3.9) | (10.1) |
| Employee taxes paid on restricted stock units recorded as treasury stock | (36.1) | (39.2) | (1.2) |
| Payment of contingent consideration | (6.4) | (1.9) | — |
| **Cash used in financing activities** | (296.9) | (486.7) | 1,540.2 |
| Effect of exchange rate changes on cash and cash equivalents | (4.4) | 0.6 | (6.6) |
| Net change in cash and cash equivalents | 218.9 | 86.7 | 71.6 |
| Cash and cash equivalents, beginning of period | 274.1 | 187.4 | 115.8 |
| **Cash and cash equivalents, end of period** | $ 493.0 | $ 274.1 | $ 187.4 |
| **Supplemental disclosure of cash flow information:** | | | |
| Cash paid during the period for: | | | |
| Interest | $ 120.0 | $ 163.5 | $ 132.1 |
| Income taxes, net of refunds | $ 134.3 | $ 111.7 | $ 111.1 |

See accompanying notes to consolidated financial statements.

**TRANSUNION AND SUBSIDIARIES**
**Consolidated Statements of Stockholders' Equity**
(in millions)

| | Common Stock | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | Paid-In Capital | Treasury Stock | Retained Earnings | Accumulated Other Comprehensive Loss | Noncontrolling Interests | Total |
| Balance, December 31, 2017 | 183.2 | $1.9 | $1,863.5 | $(138.8) | $137.4 | $(135.3) | $ 95.9 | $1,824.6 |
| Net income | — | — | — | — | 276.6 | — | 10.9 | 287.5 |
| Other comprehensive income (loss) | — | — | — | — | — | (147.4) | (3.8) | (151.2) |
| Distributions to noncontrolling interests | — | — | — | — | — | — | (10.7) | (10.7) |
| Noncontrolling interests of acquired businesses | — | — | — | — | — | — | 0.3 | 0.3 |
| Stock-based compensation | — | — | 55.9 | — | — | — | — | 55.9 |
| Employee share purchase plan | 0.2 | — | 11.3 | — | — | — | — | 11.3 |
| Exercise of stock options | 2.3 | — | 16.6 | — | — | — | — | 16.6 |
| Treasury stock purchased | — | — | — | (1.2) | — | — | — | (1.2) |
| Dividends to shareholders ($0.225 per share) | — | — | — | — | (42.6) | — | — | (42.6) |
| Cumulative effect of adopting Topic 606, net of tax | — | — | — | — | (6.0) | — | (0.1) | (6.1) |
| Cumulative effect of adopting ASC 2016-16 | — | — | — | — | (2.2) | — | — | (2.2) |
| Other | — | — | — | 0.1 | (0.1) | — | — | — |
| Balance, December 31, 2018 | 185.7 | $1.9 | $1,947.3 | $(139.9) | $363.1 | $(282.7) | $ 92.5 | $1,982.2 |

**TRANSUNION AND SUBSIDIARIES**
**Consolidated Statements of Stockholders' Equity—Continued**
(in millions)

| | Common Stock | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | Paid-In Capital | Treasury Stock | Retained Earnings | Accumulated Other Comprehensive Loss | Noncontrolling Interests | Total |
| Net income | — | $ — | $ — | $ — | $346.9 | $ — | $ 5.1 | $ 352.0 |
| Other comprehensive income | — | — | — | — | — | 31.1 | 0.6 | 31.7 |
| Distributions to noncontrolling interests | — | — | — | — | — | — | (4.1) | (4.1) |
| Noncontrolling interests of acquired businesses | — | — | — | — | — | — | (0.1) | (0.1) |
| Stock-based compensation | — | — | 48.4 | — | — | — | — | 48.4 |
| Employee share purchase plan | 0.3 | — | 15.2 | — | — | — | — | 15.2 |
| Exercise of stock options | 1.6 | — | 11.4 | — | — | — | — | 11.4 |
| Vesting of restricted stock units and performance stock units | 1.7 | — | — | — | — | — | — | — |
| Treasury stock purchased | (0.6) | — | — | (39.2) | — | — | — | (39.2) |
| Dividends to shareholders ($0.30 per share) | — | — | — | — | (57.1) | — | — | (57.1) |
| Cumulative effect of adopting ASC 2017-12 | — | — | — | — | (1.0) | — | — | (1.0) |
| Other | — | — | — | (0.1) | 0.1 | — | — | — |
| Balance, December 31, 2019 | 188.7 | $1.9 | $2,022.3 | $(179.2) | $652.0 | $(251.6) | $94.0 | $2,339.4 |

**TRANSUNION AND SUBSIDIARIES**
**Consolidated Statements of Stockholders' Equity—Continued**
(in millions)

| | Common Stock | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | Paid-In Capital | Treasury Stock | Retained Earnings | Accumulated Other Comprehensive Loss | Noncontrolling Interests | Total |
| Net income | — | $ — | $ — | $ — | $343.2 | $ — | $ 12.4 | $ 355.6 |
| Other comprehensive income (loss) | — | — | — | — | — | (20.5) | 0.5 | (20.0) |
| Distributions to noncontrolling interests | — | — | — | — | — | — | (10.9) | (10.9) |
| Noncontrolling interests of acquired businesses | — | — | (3.7) | — | — | — | 0.3 | (3.4) |
| Stock-based compensation | — | — | 43.7 | — | — | — | — | 43.7 |
| Employee share purchase plan | 0.2 | — | 19.1 | — | — | — | — | 19.1 |
| Exercise of stock options | 0.9 | 0.1 | 6.7 | — | — | — | — | 6.8 |
| Vesting of restricted stock units and performance stock units | 1.1 | — | — | — | — | — | — | — |
| Treasury stock purchased | (0.4) | — | — | (36.1) | — | — | — | (36.1) |
| Dividends to shareholders ($0.30 per share) | — | — | — | — | (57.7) | — | — | (57.7) |
| Other | — | — | — | — | — | — | (0.4) | (0.4) |
| Balance, December 31, 2020 | 190.5 | $2.0 | $2,088.1 | $(215.2) | $937.4 | $(272.1) | $ 95.9 | $2,636.1 |

See accompanying notes to consolidated financial statements.

## 1. Significant Accounting and Reporting Policies

### *Description of Business*

TransUnion is a leading global information and insights company that strives to make trust possible between businesses and consumers, working to ensure that each person is reliably and safely represented in the marketplace. At TransUnion, we find innovative ways to leverage data and information to help businesses and consumers transact with confidence and achieve great things. We call this Information for Good.

Grounded in our legacy as a credit reporting agency, we have built a robust and accurate database of information for a large portion of the adult population in the markets we serve. We use our data fusion methodology to link and match an increasing set of other disparate data to further enrich our database. We use this enriched data, combined with our expertise, to continuously develop more powerful and useful solutions for our customers, all in accordance with global laws and regulations. Because of our work, organizations can better understand consumers in order to make more informed decisions, and earn consumer trust through great, personalized experiences, and the proactive extension of the right opportunities, tools and offers. In turn, we believe consumers can be confident that their data identities will result in the opportunities they deserve.

We provide consumer reports, actionable insights and analytics such as credit and other scores, and solutions capabilities to businesses. Businesses embed our solutions into their process workflows to acquire new customers, assess consumer ability to pay for services, identify cross-selling opportunities, measure and manage debt portfolio risk, collect debt, verify consumer identities and investigate potential fraud. Consumers use our solutions to view their credit profiles and access analytical tools that help them understand and manage their personal information and take precautions against identity theft. We have deep domain expertise across a number of attractive industries, which we also refer to as verticals, including Financial Services, Healthcare, Insurance and other markets we serve. We have a global presence in over 30 countries and territories across North America, Latin America, Europe, Africa, India, and Asia Pacific.

Our solutions are based on a foundation of financial, credit, alternative credit, identity, bankruptcy, lien, judgment, healthcare, insurance claims, automotive and other relevant information obtained from thousands of sources including financial institutions, private databases, public records repositories, and other data sources. We refine, standardize and enhance this data using sophisticated algorithms to create proprietary databases. Our technology infrastructure allows us to efficiently integrate our data with our analytics and solutions capabilities to create and deliver innovative solutions to our customers and to quickly adapt to changing customer needs. Our deep analytics resources, including our people and tools driving predictive modeling and scoring, customer segmentation, benchmarking and forecasting, enable us to provide businesses and consumers with better insights into their data. Our solutions capabilities, which are generally delivered on a software-as-a-service platform, allow businesses to interpret data and apply their specific qualifying criteria to make decisions and take actions. Collectively, our data, analytics and solutions capabilities allow businesses to authenticate the identity of consumers, effectively determine the most relevant products for consumers, retain and cross-sell to existing consumers, identify and acquire new consumers and reduce loss from fraud and data breaches. Similarly, our capabilities allow consumers to see how their credit profiles have changed over time, understand the impact of financial decisions on their credit scores, manage their personal information and take precautions against identity theft.

### *Basis of Presentation*

The accompanying consolidated financial statements of TransUnion and subsidiaries have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP"). Our consolidated financial statements reflect all adjustments which, in the opinion of management, are necessary for a fair presentation of the periods presented. All significant intercompany transactions and balances have been eliminated. As a result of displaying amounts in millions, rounding differences may exist in the financial statements and footnote tables. Certain prior period presentations have been recast to conform to current year presentations.

Unless the context indicates otherwise, any reference in this report to the "Company," "we," "our," "us," and "its" refers to TransUnion and its consolidated subsidiaries, collectively.

For the periods presented, TransUnion does not have any material assets, liabilities, revenues, expenses or operations of any kind other than its ownership investment in TransUnion Intermediate.

***Principles of Consolidation***

The consolidated financial statements of TransUnion include the accounts of TransUnion and all of its controlled subsidiaries. Investments in nonmarketable unconsolidated entities in which the Company is able to exercise significant influence are accounted for using the equity method. Investments in nonmarketable unconsolidated entities in which the Company is not able to exercise significant influence, our "Cost Method Investments," are accounted for at our initial cost, minus any impairment, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer.

***Use of Estimates***

The preparation of consolidated financial statements and related disclosures in accordance with GAAP requires management to make estimates and judgments that affect the amounts reported. We believe that the estimates used in preparation of the accompanying consolidated financial statements are reasonable, based upon information available to management at this time. These estimates and judgments affect the reported amounts of assets, liabilities and disclosure of contingent assets and liabilities at the balance sheet date, as well as the amounts of revenue and expense during the reporting period. Estimates are inherently uncertain and actual results could differ materially from the estimated amounts.

***Impact of coronavirus ("COVID-19") On Our Financial Statements***

On March 11, 2020, the World Health Organization declared COVID-19 a global pandemic and recommended extensive containment and mitigation measures worldwide. The outbreak has reached all of the regions in which we do business, and governmental authorities around the world have implemented numerous measures attempting to contain and mitigate the effects of the virus, including travel bans and restrictions, border closings, quarantines, shelter-in-place orders, shutdowns, limitations or closures of non-essential businesses, school closures, social distancing requirements and various economic stimulus initiatives. While certain of these measures have been relaxed or reversed to varying degrees throughout the world, many have subsequently been reinstated and even tightened, adding an additional layer of uncertainty. In the fourth quarter of 2020, several COVID-19 vaccines were approved for use by various governments throughout the world, including in the United States. The vaccines have begun to be distributed and administered in the United States and various other regions where we operate.

The global spread of COVID-19 and actions taken in response to the virus continue to negatively affect workforces, customers, consumer confidence, financial markets, employment rates, consumer spending, credit markets and housing demand, caused significant economic, business and social disruptions, volatility and financial uncertainty, and led to a significant economic downturn, including in the markets where we operate. Businesses and consumers continue to react and adapt to the uncertainty with varying degrees of success in the markets where we operate. Since mid-March 2020, the COVID-19 pandemic, widespread measures implemented to contain its effects, and business and consumer responses to such measures, have had a material and adverse impact on numerous aspects of our business, including customer demand for our services and solutions in all of our segments. While we have seen signs of increased demand for our services in the markets where we operate since the low point in April 2020, including ongoing improvements through the fourth quarter 2020, the impact of COVID-19, including government measures and business and consumer responses to such measures, may continue to have a material adverse impact on our business for an uncertain period of time.

We have assessed various accounting estimates and other matters, including those that require consideration of forecasted financial information, in context with the unknown future impacts of COVID-19 using information that is reasonably available to us at this time. The accounting estimates and other matters we have assessed include, but were not limited to, our allowance for doubtful accounts, stock-based compensation, goodwill and other long-lived assets, financial assets, valuation allowances for tax assets and revenue recognition. While our current assessment of these estimates did not have a material impact on our consolidated financial statements as of and for twelve months ended December 31, 2020, as additional information becomes available to us, our future assessment of these estimates, including our expectations at the time regarding the duration, scope and severity of the pandemic, as well as other factors, could materially and adversely impact our consolidated financial statements in future reporting periods.

***Segments***

Operating segments are businesses for which separate financial information is available and evaluated regularly by our chief operating decision maker ("CODM") deciding how to allocate resources and assess performance. We have four operating segments; U.S. Markets, Healthcare, International and Consumer Interactive. We aggregate our U.S. Markets and Healthcare operating segments into the U.S. Markets reportable segment. We report our financial results in three reportable segments; U.S. Markets, International, and Consumer Interactive. We also report expenses for Corporate, which provides support services to each segment. Details of our segment results are discussed in Note 18, "Reportable Segments."

***Revenue Recognition and Deferred Revenue***

All of our revenue is derived from contracts with our customers and is reported as revenue in the Consolidated Statements of Income generally as or at the point in time our performance obligations are satisfied. A performance obligation is a promise in a contract to transfer a distinct good or service to a customer. We have contracts with two general groups of performance obligations; those that require us to stand ready to provide goods and services to a customer to use as and when requested ("Stand Ready Performance Obligations") and those that do not require us to stand ready ("Other Performance Obligations"). Our Stand Ready Performance Obligations include obligations to stand ready to provide data, process transactions, access our databases, software-as-a-service and direct-to-consumer products, rights to use our intellectual property and other services. Our Other Performance Obligations include the sale of certain batch data sets and various professional and other services. See Note 13, "Revenue," for a further discussion about our revenue recognition policies.

Deferred revenue generally consists of amounts billed in excess of revenue recognized for the sale of data services, subscriptions and set up fees. As our contracts with customers generally have a duration of one year or less, our contract liabilities consist of deferred revenue that is primarily short-term in nature. The current and long-term portions of deferred revenue are included in other current liabilities and other liabilities.

***Costs of Services***

Costs of services include data acquisition and royalty fees, personnel costs related to our databases and software applications, consumer and call center support costs, hardware and software maintenance costs, telecommunication expenses and occupancy costs associated with the facilities where these functions are performed.

### *Selling, General and Administrative Expenses*

Selling, general and administrative expenses include personnel-related costs for sales, administrative and management employees, costs for professional and consulting services, advertising and occupancy and facilities expense of these functions. Advertising costs, are expensed as incurred. Advertising costs, which include commissions we pay to our partners to promote our products online, for the years ended December 31, 2020, 2019 and 2018 were $89.9 million, $83.5 million and $79.3 million, respectively.

### *Stock-Based Compensation*

Compensation expense for all stock-based compensation awards is determined using the grant date fair value. For all equity-based plan, we record the impact of forfeitures when they happen. Expense is recognized on a straight-line basis over the requisite service period of the award, which is generally equal to the vesting period. The details of our stock-based compensation program are discussed in Note 16, “Stock-Based Compensation.”

### *Income Taxes*

Deferred income tax assets and liabilities are determined based on the estimated future tax effects of temporary differences between the financial statement and tax basis of assets and liabilities, as measured by current enacted tax rates. The effect of a tax rate change on deferred tax assets and liabilities is recognized in operations in the period that includes the enactment date of the change. We periodically assess the recoverability of our deferred tax assets, and a valuation allowance is recorded against deferred tax assets if it is more likely than not that some portion of the deferred tax assets will not be realized. See Note 15, “Income Taxes,” for additional information.

### *Foreign Currency Translation*

The functional currency for each of our foreign subsidiaries is generally that subsidiary’s local currency. We translate the assets and liabilities of foreign subsidiaries at the year-end exchange rate, and translate revenues and expenses at the monthly average rates during the year. We record the resulting translation adjustment as a component of other comprehensive income in stockholders’ equity.

Transaction gains and losses that arise from exchange rate fluctuations on transactions denominated in a currency other than the functional currency of an entity are included in the results of operations as incurred. The exchange rate losses for the years ended December 31, 2020, 2019 and 2018 were not material.

### *Cash and Cash Equivalents*

We consider investments in highly liquid debt instruments with original maturities of three months or less to be cash equivalents. The carrying value of our cash and cash equivalents approximate their fair value.

### *Trade Accounts Receivable*

We base our allowance for doubtful accounts estimate on our historical write-off experience, current conditions, an analysis of the aging of outstanding receivables and customer payment patterns, and specific reserves for customers in adverse financial condition or for existing contractual disputes. Beginning January 1, 2020, we also considered our current expectations of future economic conditions, including the impact of COVID-19, when estimating our allowance for doubtful accounts. We made an immaterial increase to our allowance for doubtful accounts as a result of our current estimate of the impact COVID-19 will have on the collectability of our accounts receivable. As additional information becomes available to us, our future assessment of our allowance for doubtful accounts could materially and adversely impact our consolidated financial statements in future reporting periods.

The following is a rollforward of the allowance for doubtful accounts for the periods presented:

| | Twelve months ended December 31, | | |
|---|---|---|---|
| | 2020 | 2019 | 2018 |
| Beginning Balance | $19.0 | $13.5 | $ 9.9 |
| Provision for losses on trade accounts receivable | 13.1 | 10.0 | 8.6 |
| Write-offs, net of recovered accounts | (5.5) | (4.5) | (5.0) |
| Ending balance | $26.6 | $19.0 | $13.5 |

***Long-Lived Assets***

*Property, Plant, Equipment and Intangibles*

Property, plant and equipment is depreciated primarily using the straight-line method, over the estimated useful lives of the assets. Buildings and building improvements are generally depreciated over 20 years. Computer equipment and purchased software are depreciated over 3 to 7 years. Leasehold improvements are depreciated over the shorter of the estimated useful life of the asset or the lease term. Other assets are depreciated over 5 to 7 years. Intangibles, other than indefinite-lived intangibles, are amortized using the straight-line method, which approximates the pattern of usage, over their economic life, generally 3 to 40 years. Assets to be disposed of, if any, are separately presented in the consolidated balance sheet and reported at the lower of the carrying amount or fair value, less costs to sell, and are no longer depreciated. See Note 3, "Property, Plant and Equipment," and Note 5, "Intangible Assets," for additional information about these assets.

*Internal Use Software*

We monitor the activities of each of our internal use software and system development projects and analyze the associated costs, making an appropriate distinction between costs to be expensed and costs to be capitalized. Costs incurred during the preliminary project stage are expensed as incurred. Many of the costs incurred during the application development stage are capitalized, including costs of software design and configuration, development of interfaces, coding, testing and installation of the software. Once the software is ready for its intended use, it is amortized on a straight-line basis over its useful life, generally 3 to 7 years.

*Impairment of Long-Lived Assets*

We review long-lived asset groups that are subject to amortization for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset group may not be recoverable. Recoverability of asset groups to be held and used is measured by a comparison of the carrying amount of an asset group to the estimated undiscounted future cash flows expected to be generated by the asset group. If the carrying amount of an asset group exceeds its estimated future cash flows, an impairment charge is recognized equal to the amount by which the carrying amount of the asset group exceeds the fair value of the asset group. There were no significant impairment charges recorded during 2020, 2019 and 2018.

***Marketable Securities***

We classify our investments in debt and equity securities in accordance with our intent and ability to hold the investments. Held-to-maturity securities are carried at amortized cost, which approximates fair value, and are classified as either short-term or long-term investments based on the contractual maturity date. Earnings from these securities are reported as a component of interest income. Available-for-sale securities are carried at fair market value, with the unrealized gains and losses, net of tax, included in accumulated other comprehensive income.

At December 31, 2020 and 2019, the Company's marketable securities consisted of available-for-sale securities. The available-for-sale securities relate to foreign exchange-traded corporate bonds. There were no significant realized or unrealized gains or losses for these securities for any of the periods presented. We follow fair value guidance to measure the fair value of our financial assets as further described in Note 17, "Fair Value".

We periodically review our marketable securities to determine if there is an other-than-temporary impairment on any security. If it is determined that an other-than-temporary decline in value exists, we write down the investment to its market value and record the related impairment loss in other income. There were no other-than-temporary impairments of marketable securities in 2020, 2019 or 2018.

***Goodwill***

Goodwill is allocated to our reporting units, which are an operating segment or one level below an operating segment. We have no indefinite-lived intangible assets other than goodwill. We conduct an impairment test in the fourth quarter of each year, or more frequently if events or circumstances indicate that the carrying value of goodwill may be impaired.

We have the option to first perform a qualitative analysis to determine if it is more likely than not that the fair value of a reporting unit is less than its carrying value. If the qualitative analysis indicates that an impairment is more likely than not for a reporting unit, we perform a quantitative impairment analysis for that reporting unit. We have the option to bypass the qualitative analysis for any reporting unit and proceed directly to performing a quantitative analysis.

When we perform a quantitative impairment analysis, we use a combination of an income approach, using the discounted cash flow method, and a market approach, using the guideline public company method, to determine the fair value of each reporting unit. For each reporting unit, we compare the fair value to its carrying value including goodwill. If the fair value of the reporting unit is less than its carrying value, we record an impairment charge based on that difference, up to the amount of goodwill recorded in that reporting unit.

The quantitative impairment analysis requires the application of a number of significant assumptions, including estimates of future revenue growth rates, EBITDA margins, discount rates, and market multiples. The projected future revenue and EBITDA margins, and the resulting projected cash flows of each reporting unit, is based on internal operating plans reviewed by management, extrapolated over the forecast period. The discount rate for each reporting unit is based on the weighted cost of capital for the reporting unit. Market multiples are based on the Guideline Public Company Method using comparable publicly traded company multiples of earnings before interest, taxes, and depreciation and amortization for a group of benchmark companies.

See Note 4, "Goodwill," for additional information about our 2020 impairment analysis.

***Benefit Plans***

We maintain a 401(k) defined-contribution profit sharing plan for eligible employees. We provide a partial matching contribution and a discretionary contribution based on a fixed percentage of a participant's eligible compensation. Contributions to this plan for the years ended December 31, 2020, 2019 and 2018 were $27.2 million, $29.6 million and $28.4 million, respectively.

***Recently Adopted Accounting Pronouncements***

On June 16, 2016, the FASB issued Accounting Standards Update ("ASU") No. 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments.* This ASU amends the accounting for credit losses on available-for-sale debt securities and purchased financial assets with credit deterioration. In addition, these amendments require the measurement of all expected credit losses for financial assets, including trade accounts receivable, held at the reporting date based on historical experience, current conditions, and current expectations of future economic conditions based on reasonable and supportable forecasts. We adopted this guidance on January 1, 2020. Upon adoption and at December 31, 2020, this new guidance did not have a material impact on our consolidated financial statements.

In March 2020, the FASB issued ASU 2020-4, Reference Rate Reform (Topic 848), *Facilitation of the Effects of Reference Rate Reform on Financial Reporting* in response to concerns about structural risks of interbank offered rates including the risk of cessation of the London Interbank Offered Rate (LIBOR), regulators in several jurisdictions around the world have undertaken reference rate reform initiatives to identify alternative reference rates that are more observable and less susceptible to manipulation. The provisions of this ASU are elective and apply to all entities, subject to meeting certain criteria, that have debt or hedging contracts and other contracts that reference LIBOR or another reference rate expected to be discontinued because of reference rate reform. This ASU, among other things, provides optional expedients and exceptions to applying certain U.S. GAAP requirements to these contracts if certain criteria are met for a limited period of time in order to ease the potential burden in accounting for or recognizing the effects of reference rate reform on financial reporting. This ASU is effective for all entities as of March 12, 2020 through December 31, 2022.

We have adopted this guidance and have applied certain optional expedients and exceptions and expect to apply other optional expedients and exceptions to our existing debt and hedge contracts that reference LIBOR, and to any other new contract that references LIBOR or another reference rate when these reference rates are discontinued and as our contracts are updated up through the transition period that ends December 31, 2022. The adoption of these expedients and exceptions did not and is not expected to have a material impact on our Consolidated Financial Statements.

***Recent Accounting Pronouncements Not Yet Adopted***

On December 18, 2019, the FASB issued ASU 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes.* This ASU removes specific exceptions to the general principles in Topic 740. Among other things it eliminates the need for organizations to analyze whether the following apply in a given period: an exception to the incremental approach for intra-period tax allocation; exceptions to accounting for basis differences when there are ownership changes in foreign investments; and an exception in interim period income tax accounting for year-to-date losses that exceed anticipated losses. This amendment also improves financial statement preparers' application of income tax-related guidance and simplifies GAAP for: franchise taxes that are partially based on income; transactions with a government that result in a step up in the tax basis of goodwill; separate financial statements of legal entities that are not subject to tax; and enacted changes in tax laws in interim periods. This guidance is effective for annual reporting periods beginning after December 15, 2020, including interim periods therein. We do not expect the impact to our consolidated financial statements to be material.

On January 16, 2020, the FASB issued ASU 2020-01, *Investments-Equity Securities (Topic 321), Investments-Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815)-Clarifying the Interactions between Topic 321, Topic 323, and Topic 815.* This amendment, among other things, clarifies that a company should consider observable transactions that require a company to either apply or discontinue the equity method of accounting under Topic 323, Investments-Equity Method and Joint Ventures, for the purposes of applying the measurement alternative in accordance with Topic 321 immediately before applying or upon discontinuing the equity method. This amendment also clarifies that, when determining the accounting for certain forward contracts and purchased options a company should not consider, whether upon settlement or exercise, if the underlying securities would be accounted for under the equity method or fair value option. This guidance is effective for annual reporting periods beginning after December 15, 2020, including interim periods therein. We do not expect this guidance to impact our consolidated financial statements.

## 2. Other Current Assets

Other current assets consisted of the following:

| (in millions) | December 31, 2020 | December 31, 2019 |
|---|---|---|
| Prepaid expenses | $ 84.7 | $ 84.1 |
| Income taxes receivable | 18.6 | 19.0 |
| Marketable securities (Note 17) | 3.2 | 2.9 |
| Contract assets (Note 13) | 1.8 | 1.4 |
| Other | 51.2 | 62.8 |
| Total other current assets | $159.5 | $170.2 |

## 3. Property, Plant and Equipment

Property, plant and equipment, including those acquired by capital lease, consisted of the following:

| (in millions) | December 31, 2020 | December 31, 2019 |
|---|---|---|
| Computer equipment and furniture | $ 465.4 | $ 395.6 |
| Purchased software | 184.4 | 160.7 |
| Building and building improvements | 119.1 | 113.9 |
| Land | 3.2 | 3.2 |
| Total cost of property, plant and equipment | 772.1 | 673.4 |
| Less: accumulated depreciation | (548.9) | (454.4) |
| Total property, plant and equipment, net of accumulated depreciation | $ 223.2 | $ 219.0 |

Depreciation expense, including depreciation of assets recorded under capital leases, for the years ended December 31, 2020, 2019 and 2018, was $96.6 million, $88.8 million and $76.6 million, respectively.

## 4. Goodwill

Our reporting units consist of U.S. Markets and Healthcare within the U.S. Markets reportable segment, Consumer Interactive, and the geographic regions of the United Kingdom, Africa, Canada, Latin America, India, and Asia Pacific within our International reportable segment.

In 2020 and 2019, we elected to bypass the qualitative goodwill impairment analysis, and instead performed a quantitative goodwill impairment analysis for all reporting units. We compared the fair value of each reporting unit to its carrying value including goodwill. For each of our reporting units, the fair value exceeded the carrying value and no impairment loss was recorded. Our reporting units that have longer operating histories have higher headroom compared with those reporting units that include significant recent acquisitions. We did not record a goodwill impairment loss in 2020, 2019 and 2018 and as of December 31, 2020, there was no accumulated goodwill impairment loss.

Goodwill allocated to our reportable segments as of December 31, 2020, and 2019, and the changes in the carrying amount of goodwill during the periods, consisted of the following:

| (in millions) | U.S. Markets | International | Consumer Interactive | Total |
|---|---|---|---|---|
| Balance, December 31, 2018 | $1,684.4 | $1,368.0 | $241.2 | $3,293.6 |
| Purchase accounting adjustments | 19.2 | 12.9 | — | 32.1 |
| 2019 Acquisitions | 17.5 | — | — | 17.5 |
| Foreign exchange rate adjustment | — | 35.9 | — | 35.9 |
| Reclassified to held-for-sale | — | (1.3) | — | (1.3) |
| Balance, December 31, 2019 | $1,721.1 | $1,415.5 | $241.2 | $3,377.8 |
| 2020 Acquisitions | 76.1 | — | — | 76.1 |
| Foreign exchange rate adjustment | — | 7.6 | — | 7.6 |
| Balance, December 31, 2020 | $1,797.2 | $1,423.1 | $241.2 | $3,461.5 |

## 5. Intangible Assets

Intangible assets are initially recorded at their acquisition cost, or fair value if acquired as part of a business combination, and amortized over their estimated useful lives. The gross amount of intangible assets during 2020 increased $162.8 million due primarily to our expenditures to develop internal use software and $41.4 million of assets acquired in business acquisitions.

Intangible assets consisted of the following:

| | December 31, 2020 | | | December 31, 2019 | | |
|---|---|---|---|---|---|---|
| (in millions) | Gross | Accumulated Amortization | Net | Gross | Accumulated Amortization | Net |
| Database and credit files | $1,418.5 | $ (566.1) | $ 852.4 | $1,406.9 | $ (470.3) | $ 936.6 |
| Internal use software | 1,387.3 | (825.5) | 561.8 | 1,250.1 | (705.5) | 544.6 |
| Customer relationships | 641.0 | (217.7) | 423.3 | 630.9 | (180.9) | 450.0 |
| Trademarks, copyrights and patents | 572.5 | (131.4) | 441.1 | 573.0 | (115.7) | 457.3 |
| Noncompete and other agreements | 17.5 | (11.5) | 6.0 | 13.1 | (9.7) | 3.4 |
| Total intangible assets | $4,036.8 | $(1,752.2) | $2,284.6 | $3,874.0 | $(1,482.1) | $2,391.9 |

All amortizable intangibles are amortized on a straight-line basis over their estimated useful lives. Database and credit files are generally amortized over a 12 to 15 year period. Internal use software is generally amortized over 3 to 7 year period. Customer relationships are amortized over a 10 to 20 year period. Trademarks are generally amortized over a 40 year period. Copyrights, patents, noncompete and other agreements are amortized over varying periods based on their estimated economic life. The weighted average lives of our intangibles is approximately 15 years.

Amortization expense related to intangible assets for the years ended December 31, 2020, 2019 and 2018, was $271.3 million, $273.3 million and $230.3 million, respectively. Estimated future amortization expense related to intangible assets at December 31, 2020, is as follows:

| (in millions) | Annual Amortization Expense |
| --- | --- |
| 2021 | $ 281.1 |
| 2022 | 269.6 |
| 2023 | 245.7 |
| 2024 | 217.5 |
| 2025 | 196.5 |
| Thereafter | 1,074.2 |
| Total future amortization expense | $2,284.6 |

**6. Other Assets**

Other assets consisted of the following:

| (in millions) | December 31, 2020 | December 31, 2019 |
| --- | --- | --- |
| Investments in affiliated companies (Note 7) | $138.8 | $133.7 |
| Right-of-use lease assets (Note 11) | 65.6 | 71.2 |
| Other | 31.7 | 31.4 |
| Total other assets | $236.1 | $236.3 |

**7. Investments in Affiliated Companies**

Investments in affiliated companies represent our investment in non-consolidated domestic and foreign entities. These entities are in businesses similar to ours, such as credit reporting, credit scoring and credit monitoring services.

We use the equity method to account for investments in affiliates where we are able to exercise significant influence. For these investments, we adjust the carrying value for our proportionate share of the affiliates' earnings, losses and distributions, as well as for purchases and sales of our ownership interest.

We account for nonmarketable investments in equity securities in which we are not able to exercise significant influence, our "Cost Method Investments", at our initial cost, minus any impairment, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer. For these investments, we adjust the carrying value for any purchases or sales of our ownership interests. We record any dividends received from these investments as other income in non-operating income and expense.

During 2020, we recorded a $4.8 million impairment loss of a Cost Method investment, partially offset by a $2.5 million gain on a Cost Method investment resulting from an observable price change for a similar investment of the same issuer. During 2019 we recorded a $31.2 million gain on a Cost Method investment resulting from an observable price change for a similar investment of the same issuer, partially offset by a $10.0 million impairment loss of other Cost Method investments. These gains and losses are included in other income and expense in the consolidated statements of income. There were no material gain or loss adjustments to our investments in nonconsolidated affiliates in 2018.

Investments in affiliated companies consisted of the following:

| (in millions) | December 31, 2020 | December 31, 2019 |
|---|---|---|
| Equity Method investments | $ 46.1 | $ 49.0 |
| Cost Method investments | 92.7 | 84.7 |
| Total investments in affiliated companies (Note 6) | $138.8 | $133.7 |

These balances are included in other assets in the consolidated balance sheets. The increase in Cost Method investments is due to two new Cost Method investments we made during 2020, partially offset by the net loss on Cost Method investments discussed above, recorded in our U.S. Markets segment.

Earnings from equity method investments, which are included in other non-operating income and expense, and dividends received from equity method investments consisted of the following:

| | Twelve Months Ended December 31, | | |
|---|---|---|---|
| (in millions) | 2020 | 2019 | 2018 |
| Earnings from equity method investments (Note 18) | $8.9 | $13.2 | $9.9 |
| Dividends received from equity method investments | $8.2 | $10.3 | $9.8 |

## 8. Other Current Liabilities

Other current liabilities consisted of the following:

| (in millions) | December 31, 2020 | December 31, 2019 |
|---|---|---|
| Accrued payroll and employee benefits | $149.3 | $146.0 |
| Deferred revenue (Note 13) | 85.5 | 82.8 |
| Accrued legal and regulatory (Note 20) | 76.0 | 30.4 |
| Contingent consideration (Note 17) | 37.8 | 7.2 |
| Operating lease liabilities (Note 11) | 17.9 | 19.9 |
| Other | 49.3 | 50.2 |
| Total other current liabilities | $415.8 | $336.5 |

The increase in accrued legal and regulatory was due primarily to accruals related to the Ramirez litigation and certain other legal and regulatory matters.

## 9. Other Liabilities

Other liabilities consisted of the following:

| (in millions) | December 31, 2020 | December 31, 2019 |
|---|---|---|
| Interest rate swaps and caps (Notes 10 and 17) | $ 89.7 | $ 46.6 |
| Operating lease liabilities (Note 11) | 54.0 | 57.2 |
| Unrecognized tax benefits, net of indirect tax effects (Note 15) | 34.4 | 32.8 |
| Deferred revenue (Note 13) | 3.0 | 15.7 |
| Other | 34.4 | 12.7 |
| Total other liabilities | $215.5 | $165.0 |

The increase in the interest rate swaps and caps liability was due primarily to changes in the forward LIBOR curve during the period.

## 10. Debt

Debt outstanding consisted of the following:

| (in millions) | December 31, 2020 | December 31, 2019 |
|---|---|---|
| Senior Secured Term Loan B-5, payable in quarterly installments through November 15, 2026, with periodic variable interest at LIBOR or alternate base rate, plus applicable margin (1.90% at December 31, 2020, and 3.55% at December 31, 2019), net of original issue discount and deferred financing fees of $3.9 million and $9.5 million, respectively, at December 31, 2020, and original issue discount and deferred financing fees of $4.8 million and $11.7 million, respectively, at December 31, 2019 | $2,335.6 | $2,508.5 |
| Senior Secured Term Loan A-3, payable in quarterly installments through December 10, 2024, with periodic variable interest at LIBOR or alternate base rate, plus applicable margin (1.40% at December 31, 2020 and 3.30% at December 31,2019), net of original issue discount and deferred financing fees of $2.6 million and $1.6 million, respectively, at December 31, 2020, and original issue discount and deferred financing fees of $3.3 million and $2.2 million, respectively, at December 31,2019 | 1,117.0 | 1,144.5 |
| Senior Secured Revolving Credit Facility | — | — |
| Other notes payable | 1.4 | 3.7 |
| Finance leases | 0.2 | 0.3 |
| Total debt | 3,454.2 | 3,657.0 |
| Less short-term debt and current portion of long-term debt | (55.5) | (58.7) |
| Total long-term debt | $3,398.7 | $3,598.3 |

Excluding any potential additional principal payments which may become due on the Senior Secured Credit Facility based on excess cash flows of the prior year, scheduled future maturities of total debt at December 31, 2020, were as follows:

| (in millions) | December 31, 2020 |
|---|---|
| 2021 | $ 55.5 |
| 2022 | 84.3 |
| 2023 | 83.6 |
| 2024 | 1,003.5 |
| 2025 | 26.0 |
| Thereafter | 2,219.0 |
| Unamortized original issue discounts and deferred financing fees | (17.7) |
| Total debt | $3,454.2 |

### *Senior Secured Credit Facility*

On June 15, 2010, we entered into a Senior Secured Credit Facility with various lenders. This facility has been amended several times and currently consists of the Senior Secured Term Loan B-5, Senior Secured Term Loan

A-3 (collectively, the “Senior Secured Term Loans”), and the Senior Secured Revolving Credit Facility. In 2019, we refinanced our Senior Secured Term Loans and recorded $13.0 million of financing fees in other income and expense in the consolidated statements of income.

During 2020 and 2019, we prepaid $150.0 million and $340.0 million, respectively, towards our Senior Secured Term Loans, funded from our cash on hand. As a result of these prepayments, we expensed $0.9 million and $2.0 million, respectively, of the unamortized original issue discount and deferred fees to other income and expense in the consolidated statement of income.

Interest rates on the Senior Secured Term Loan B-5 are based on the London Interbank Offered Rate (“LIBOR”), unless otherwise elected, plus a margin of 1.75%. The Company is required to make principal payments at the end of each quarter of 0.25% of the 2019 refinanced principal balance plus additional borrowings with the remaining balance due November 15, 2026.

Interest rates on Senior Secured Term Loan A-3 are based on LIBOR, unless otherwise elected, plus a margin of 1.25%, 1.50% or 1.75% depending on our total net leverage ratio. The Company is required to make principal payments of 0.625%, of the 2019 refinanced principal balance plus additional borrowings, at the end of each quarter through December 2021, increasing to 1.25% each quarter thereafter, with the remaining balance due December 10, 2024.

Interest rates on the Senior Secured Revolving Credit Facility are based on LIBOR, unless otherwise elected, plus a margin of 1.25%, 1.50% or 1.75% depending on our total net leverage ratio. There is a 0.20%, 0.25% or 0.30% annual commitment fee, depending on our total net leverage ratio, payable quarterly based on the undrawn portion of the Senior Secured Revolving Credit Facility. The commitment under the Senior Secured Revolving Line of Credit expires on December 10, 2024.

The Company may be required to make additional payments based on excess cash flows of the prior year, as defined in the agreement. Depending on the senior secured net leverage ratio for the year, a principal payment of between zero and fifty percent of the excess cash flows will be due the following year. The senior secured net leverage ratio for the year resulted in no required payment for 2021. Additional payments based on excess cash flows could be due in future years.

As of December 31, 2020, we had no outstanding balance under the Senior Secured Revolving Credit Facility and $0.1 million of outstanding letters of credit, and could have borrowed up to the remaining $299.9 million available.

TransUnion also has the ability to request incremental loans on the same terms under the Senior Secured Credit Facility up to the greater of $1,000.0 million and 100% of Consolidated EBITDA, and may incur additional incremental loans so long as the senior secured net leverage ratio does not exceed 4.25-to-1, subject to certain additional conditions and commitments by existing or new lenders to fund any additional borrowings.

With certain exceptions, the Senior Secured Credit Facility obligations are secured by a first-priority security interest in substantially all of the assets of Trans Union LLC, including its investment in subsidiaries. The Senior Secured Credit Facility contains various restrictions and nonfinancial covenants, along with a senior secured net leverage ratio test. The nonfinancial covenants include restrictions on dividends, investments, dispositions, future borrowings and other specified payments, as well as additional reporting and disclosure requirements. The senior secured net leverage test must be met as a condition to incur additional indebtedness, make certain investments, and may be required to make certain restricted payments. The senior secured net leverage ratio must not exceed 5.5-to-1 at any such measurement date. Under the terms of the Senior Secured Credit Facility, TransUnion may make dividend payments up to the greater of $75 million or 7.5% of Consolidated EBITDA per year, or an unlimited amount provided that no default or event of default exists and so long as the total net leverage ratio does not exceed 4.75-to-1. As of December 31, 2020, we were in compliance with all debt covenants.

***Interest Rate Hedging***

On March 10, 2020, we entered into two tranches of interest rate swap agreements with various counter-parties that effectively fix our LIBOR exposure on a portion of our Senior Secured Term Loans or similar replacement debt. The first tranche commenced on June 30, 2020, and expires on June 30, 2022, with a current aggregate notional amount of $1,140.0 million that amortizes each quarter. The first tranche requires TransUnion to pay fixed rates varying between 0.5200% and 0.5295% in exchange for receiving a variable rate that matches the variable rate on our loans. The second tranche commences on June 30, 2022, and expires on June 30, 2025, with an initial aggregate notional amount of $1,110.0 million that amortizes each quarter after it commences. The second tranche requires TransUnion to pay fixed rates varying between 0.9125% and 0.9280% in exchange for receiving a variable rate that matches the variable rate on our loans. We have designated these swap agreements as cash flow hedges.

On December 17, 2018, we entered into interest rate swap agreements with various counter-parties that effectively fix our LIBOR exposure on a portion of our Senior Secured Term Loans or similar replacement debt, which is currently fixed at 2.702% and 2.706%. We have designated these swap agreements as cash flow hedges. The current aggregate notional amount under these agreements is $1,410.0 million, decreasing each quarter until the second agreement terminates on December 30, 2022.

On December 18, 2015, we entered into interest rate cap agreements with various counter-parties that effectively capped our LIBOR exposure on a portion of our Senior Secured Term Loans or similar replacement debt at 0.75% beginning June 30, 2016. These cap agreements expired on June 30, 2020, and were previously designated as cash flow hedges.

The change in the fair value of our hedging instruments, included in our assessment of hedge effectiveness, is recorded in other comprehensive income, and reclassified to interest expense when the corresponding hedged debt affects earnings.

The net change in the fair value of the swaps resulted in an unrealized loss of $43.5 million ($32.7 million, net of tax), $35.4 million ($26.7 million, net of tax), and $10.7 million ($8.1 million, net of tax) for the years ended December 31, 2020, 2019 and 2018, respectively, recorded in other comprehensive income. Interest expense on the swaps in the twelve months ended December 31, 2020 and December 31, 2019 was expense of $32.3 million ($23.3 million, net of tax) and $5.6 million ($4.2 million), respectively. We expect to recognize a loss of approximately $40.8 million as interest expense due to our expectation that LIBOR will exceed the fixed rates of interest over the next twelve months.

The net change in the caps resulted in a recognition into interest expense previously unrealized loss of $4.1 million ($2.8 million, net of tax), an unrealized loss of $11.0 million ($8.2 million, net of tax), and an unrealized gain of $7.6 million ($5.7 million, net of tax) for the years ended December 31, 2020, 2019 and 2018, respectively, recorded in other comprehensive income. Interest expense reclassified from other comprehensive income to interest expense related to the fair value of the portion of the caps expiring in the twelve-month period of 2020, 2019 and 2018 was a expense of $6.7 million ($5.1 million net of tax), income of $1.9 million ($1.4 million net of tax) and income of $2.4 million ($1.5 million net of tax), respectively.

***Fair Value of Debt***

As of December 31, 2020 and December 31, 2019, the fair value of our Senior Secured Term Loan B-5, excluding original issue discounts and deferred fees, was approximately $2,351.9 million and $2,537.6 million, respectively. As of December 31, 2020 and December 31, 2019, the fair value of our variable-rate Senior Secured Term Loan A-3, excluding original issue discounts and deferred fees was approximately $1,112.8 million and $1,144.5 million, respectively. The fair values of our variable-rate term loans are determined using Level 2 inputs, based on quoted market prices for the publicly traded instruments.

## 11. Leases

Our lease obligations consist of operating leases for office space and data centers and a small number of finance leases for equipment. Our operating leases have remaining lease terms of up to 11.8 years. As of December 31, 2020 and December 31, 2019 the weighted-average remaining lease terms were 5.3 years and 5.5 years, respectively. We have options to extend many of our operating leases for an additional period of time and options to terminate early several of our operating leases. The lease term consists of the non-cancelable period of the lease, periods covered by options to extend the lease if we are reasonably certain to exercise the option, periods covered by an option to terminate the lease if we are reasonably certain not to exercise the option, and periods covered by an option to extend or not to terminate the lease in which the exercise of the option is controlled by the lessor.

On the commencement date of an operating lease, we record an ROU asset, which represents our right to use or control the use of the specified asset for the lease term, and an offsetting lease liability, which represents our obligation to make lease payments arising from the lease, based on the present value of the net fixed future lease payments due over the initial lease term. We use an estimate of the incremental borrowing rate for similarly rated debt issuers as the discount rate to determine the present value of the net fixed future lease payments, except for leases where the interest rate implicit in the lease is readily determinable. As of December 31, 2020 and December 31, 2019, the weighted-average discount rate at lease inception used to calculate the present value of the fixed future lease payments was 5.7% for both periods.

Both Topic 842 and the predecessor lease accounting guidance under ASU 840 require us to expense the net fixed payments of operating leases on a straight-line basis over the lease term. Topic 842 requires us to include any built up deferred or prepaid rent balance resulting from the difference between the straight-line expense and the cash payments as a component of our ROU asset. Also included in our ROU asset is any monthly prepayment of rent. Our rent expense is typically due on the first day of each month, and we typically pay rent several weeks before it is due, so at any given month end, we will have a prepaid rent balance that is included as a component of our ROU asset.

Most of our operating leases contain variable non-lease components consisting of maintenance, insurance, utilities, taxes and similar costs of the office and data center space we occupy. We have adopted the practical expedient to not separate these non-lease components from the lease components and instead account for them as a single lease component for all of our leases. We straight-line the net fixed payments of operating leases over the lease term and expense the variable lease payments in the period in which we incur the obligation to pay such variable amounts. These variable lease payments are not included in our calculation of our ROU assets or lease liabilities.

We have no significant short-term operating leases, finance leases, or subleases.

ROU assets are included in Other Assets, and operating lease liabilities are included in Other Current Liabilities and Other Liabilities in our Consolidated Balance Sheet. Finance lease assets are included in Property, Plant and Equipment, and finance lease liabilities are included in the Current Portion of Long-term Debt and Long-term Debt in our Consolidated Balance Sheet. See Note 6, “Other Assets,” Note 8, “Other Current Liabilities,” Note 9, “Other Liabilities,” and Note 10, “Debt,” for additional information about these items.

For the years ended December 31, 2020 and 2019 our operating lease costs, including fixed, variable and short-term lease costs, were $36.6 million, $35.5 million, respectively, and for the year ended December 31, 2018, our rent expense was $28.6 million, respectively. Cash paid for operating leases are included in operating cash flows, and were $37.5 million, $36.3 million, and $27.2 million, respectively, for the years ended December 31, 2020, 2019, and 2018. Our finance lease amortization expense, interest expense, and cash paid were not significant for the reported periods.

We have adopted the package of transition practical expedients which allows us to not reassess our existing lease classifications, initial direct costs, and whether or not an existing contract contains a lease.

We have elected to use the portfolio approach to assess the discount rate we use to calculate the present value of our future lease payments. Using this approach does not result in a materially different outcome compared with applying separate discount rates to each lease in our portfolio.

We have adopted an accounting policy to recognize rent expense for short-term leases, those leases with initial lease terms of twelve months or less, on a straight-line basis in our income statement.

Future fixed payments for non-cancelable operating leases and finance leases in effect as of December 31, 2020, are payable as follows:

| (in millions) | Operating Leases | Finance Leases | Total |
|---|---|---|---|
| 2021 | $ 18.5 | $0.1 | $ 18.6 |
| 2022 | 16.9 | 0.1 | 17.0 |
| 2023 | 14.7 | — | 14.7 |
| 2024 | 11.3 | — | 11.3 |
| 2025 | 8.8 | — | 8.8 |
| Thereafter | 13.9 | — | 13.9 |
| Less imputed interest | (12.2) | — | (12.2) |
| Totals | $ 71.9 | $0.2 | $ 72.1 |

## 12. Stockholders' Equity

### *Common Stock Dividends*

On February 13, 2018, we announced that our board of directors approved a dividend policy pursuant to which we intend to pay quarterly cash dividends on our common stock. Beginning in the second quarter of 2018 and each subsequent quarter, the board of directors declared quarterly dividends of $0.075 per share. During 2020, 2019 and 2018, we paid dividends of $57.6 million, $56.8 million and $41.6 million, respectively. Portions of the dividends declared are payable as dividend equivalents to employees who hold restricted stock units when those units vest.

Any determination to pay dividends in the future will be at the discretion of our board of directors and will depend upon results of operations, financial condition, contractual restrictions, restrictions imposed by applicable law and other factors our board of directors deems relevant. We currently have capacity and intend to continue to pay a quarterly dividend, subject to approval by our board. While we expect to continue to pay dividends at this time, if circumstances deteriorate, we would consider recommending that our board temporarily reduce or suspend our dividend.

### *Treasury Stock*

On February 13, 2017, our board of directors authorized the repurchase of up to $300.0 million of our common stock over the next 3 years. Our board of directors removed the three-year time limitation on February 8, 2018. To date, we have repurchased $133.5 million of our common stock and have the ability to repurchase the remaining $166.5 million.

We have no obligation to repurchase additional shares, and the timing, actual number and value of the shares that are repurchased, if any, will be at the discretion of management and will depend on a number of factors, including market conditions, the cost of repurchasing shares, the availability of alternative investment opportunities, liquidity, and other factors deemed appropriate. Repurchases may be suspended, terminated or modified at any time for any reason. Any repurchased shares will have the status of treasury shares and may be used, if and when needed, for general corporate purposes. While the existing share repurchase program remains authorized by the board of directors, given the uncertainties arising from the COVID-19 pandemic, we do not intend to repurchase additional shares in the short term. We may resume share repurchases in the future at any time, depending upon market conditions, our capital needs and other factors.

During 2020 and 2019, 1.1 million and 1.7 million outstanding employee restricted stock units, respectively, vested and became taxable to the employees. During 2020 and 2019, the employees used 0.4 million and 0.6 million shares, respectively, of the vested stock to satisfy their payroll tax withholding obligations in a net share settlement arrangement whereby the employees received 0.7 million and 1.1 million, respectively, of the shares and gave TransUnion the remaining 0.4 million and 0.6 million shares, respectively, that we have recorded as treasury stock. During 2020 and 2019, we remitted cash equivalent to the $36.1 million and $39.2 million, respectively, of the vest date value of the treasury stock to the respective governmental agencies in settlement of the employee withholding tax obligations.

***Preferred Stock***

As of December 31, 2020 and 2019, we had 100.0 million shares of preferred stock authorized and no preferred stock issued or outstanding.

## 13. Revenue

All of our revenue is derived from contracts with customers and is reported as revenue in the consolidated statements of income generally as, or at the point in time, the performance obligation is satisfied. A performance obligation is a promise in a contract to transfer a distinct good or service to a customer. We have contracts with two general groups of performance obligations; those that require us to stand ready to provide goods and services to a customer to use as and when requested ("Stand Ready Performance Obligations") and those that do not require us to stand ready ("Other Performance Obligations"). Our Stand Ready Performance Obligations include obligations to stand ready to provide data, process transactions, access our databases, software-as-a-service and direct-to-consumer products, provide rights to use our intellectual property and other services. Our Other Performance Obligations include the sale of certain batch data sets and various professional and other services.

Most of our Stand Ready Performance Obligations consist of a series of distinct goods and services that are substantially the same and have the same monthly pattern of transfer to our customers. We consider each month of service in this time series to be a distinct performance obligation and, accordingly, recognize revenue over time. For a majority of these Stand Ready Performance Obligations the total contractual price is variable because our obligation is to process an unknown quantity of transactions, as and when requested by our customers, over the contract period. We allocate the variable price to each month of service using the time-series concept and recognize revenue based on the most likely amount of consideration to which we will be entitled**,** which is generally the amount we have the right to invoice. This monthly amount can be based on the actual volume of units delivered or a guaranteed minimum, if higher. Occasionally we have contracts where the amount we will be entitled to for the transactions processed is uncertain, in which case we estimate the revenue based on what we consider to be the most likely amount of consideration we will be entitled to, and adjust any estimates as facts and circumstances evolve.

Certain Stand Ready Performance Obligation fees result from contingent fee based contracts that require us to provide services before we have an enforceable right to payment. For these performance obligations, we recognize revenue at the point in time the contingency is met and we have an enforceable contract and right to payment.

For all contracts that include a Stand Ready Performance Obligation with variable pricing, we are unable to estimate the variable price attributable to future performance obligations because the number of units to be purchased is not known. As a result, we use the exception available to forgo disclosures about revenue attributable to the future performance obligations where we recognize revenue using the time-series concept as discussed above, including those qualifying for the right to invoice practical expedient. We also use the exception available to forgo disclosures about revenue attributable to contracts with expected durations of one year or less.

Certain of our Other Performance Obligations, including certain batch data sets and certain professional and other services, are delivered at a point in time. Accordingly, we recognize revenue upon delivery, once we have satisfied that obligation. For certain Other Performance Obligations, including certain professional and other services, we recognize revenue over time, based on an estimate of progress towards completion of that obligation. These contracts are not material.

In certain circumstances we apply the revenue recognition guidance to a portfolio of contracts with similar characteristics. We use estimates and assumptions when accounting for a portfolio that reflect the size and composition of the portfolio of contracts.

Our contracts include standard commercial payment terms generally acceptable in each region, and do not include financing with extended payment terms. We have no significant obligations for refunds, warranties, or similar obligations. Our revenue does not include taxes collected from our customers.

Accounts receivable are shown separately on our balance sheet. Contract assets and liabilities result due to the timing of revenue recognition, billings and cash collections. Contract assets include our right to payment for goods and services already transferred to a customer when the right to payment is conditional on something other than the passage of time, for example, contracts pursuant to which we recognize revenue over time but do not have a contractual right to payment until we complete the contract. Contract assets are included in our other current assets and are not material as of December 31, 2020 and 2019.

As our other contracts with customers generally have a duration of one year or less, our contract liabilities consist of deferred revenue that is primarily short-term in nature. Contract liabilities include current and long-term deferred revenue that is included in other current liabilities and other liabilities. We expect to recognize the December 31, 2020, current deferred revenue balance as revenue during 2021. The majority of our long-term deferred revenue, which is not material, is expected to be recognized in less than two years.

For additional disclosures about the disaggregation of our revenue see Note 18, “Reportable Segments.”

### 14. Earnings Per Share

Basic earnings per share represents income available to common stockholders divided by the weighted average number of common shares outstanding during the reported period. Diluted earnings per share reflects the effect of the increase in shares outstanding determined by using the treasury stock method for awards issued under our incentive stock plans.

As of December 31, 2020, 2019 and 2018 there were less than 0.1 million anti-dilutive weighted stock-based awards outstanding. As of December 31, 2020, there were 1.3 million contingently issuable performance-based stock awards outstanding that were excluded from the diluted earnings per share calculation because the contingencies had not been met. As of December 31, 2019 and 2018, there were 1.1 million contingently issuable performance-based stock awards outstanding that were excluded from the diluted earnings per share calculation because the contingencies had not been met.

Basic and diluted weighted average shares outstanding and earnings per share were as follows:

| (in millions, except per share data) | Twelve Months Ended December 31, 2020 | 2019 | 2018 |
|---|---|---|---|
| Income from continuing operations | $355.6 | $356.6 | $289.0 |
| Less: income from continuing operations attributable to noncontrolling interests | (12.4) | (5.1) | (10.9) |
| Income from continuing operations attributable to TransUnion | $343.2 | $351.5 | $278.1 |
| Discontinued operations, net of tax(1) | — | (4.6) | (1.5) |
| Net income attributable to TransUnion | $343.2 | $346.9 | $276.6 |
| **Basic earnings per common share from:** | | | |
| Income from continuing operations attributable to TransUnion | $ 1.81 | $ 1.87 | $ 1.51 |
| Discontinued operations, net of tax(1) | — | (0.02) | (0.01) |
| Net Income attributable to TransUnion | $ 1.81 | $ 1.85 | $ 1.50 |
| **Diluted earnings per common share from:** | | | |
| Income from continuing operations attributable to TransUnion | $ 1.79 | $ 1.83 | $ 1.46 |
| Discontinued operations, net of tax(1) | — | (0.02) | (0.01) |
| Net Income attributable to TransUnion | $ 1.79 | $ 1.81 | $ 1.45 |
| **Weighted-average shares outstanding:** | | | |
| Basic | 189.9 | 187.8 | 184.6 |
| Dilutive impact of stock based awards | 2.3 | 4.1 | 6.2 |
| Diluted | 192.2 | 191.8 | 190.9 |

(1) Discontinued operations for the twelve months ended December 31, 2020 is zero.

## 15. Income Taxes

The provision (benefit) for income taxes consisted of the following:

| (in millions) | Twelve Months Ended December 31, 2020 | 2019 | 2018 |
|---|---|---|---|
| Federal | | | |
| Current | $ 67.9 | $ 50.5 | $ 62.7 |
| Deferred | (7.4) | (0.6) | (57.0) |
| State | | | |
| Current | 15.0 | 3.6 | 11.9 |
| Deferred | (4.1) | (8.2) | (3.9) |
| Foreign | | | |
| Current | 52.6 | 52.2 | 48.9 |
| Deferred | (23.7) | (13.6) | (8.1) |
| Total provision (benefit) for income taxes | $100.2 | $ 83.9 | $ 54.5 |

The components of income before income taxes consisted of the following:

| (in millions) | Twelve Months Ended December 31, 2020 | 2019 | 2018 |
|---|---|---|---|
| Domestic | $324.1 | $333.2 | $256.5 |
| Foreign | 131.6 | 107.3 | 87.0 |
| Income before income taxes | $455.8 | $440.5 | $343.5 |

The effective income tax rate reconciliation consisted of the following:

| (in millions) | Twelve Months Ended December 31, 2020 | | 2019 | | 2018 | |
|---|---|---|---|---|---|---|
| Income taxes at statutory rate | $ 95.7 | 21.0% | $ 92.5 | 21.0% | $ 72.1 | 21.0% |
| Increase (decrease) resulting from: | | | | | | |
| State taxes, net of federal benefit | 11.6 | 2.5% | — | —% | 10.4 | 3.0% |
| Foreign rate differential | (9.2) | (2.0)% | 10.6 | 2.4% | 9.7 | 2.8% |
| Excess tax benefits on stock-based compensation | (26.0) | (5.7)% | (39.1) | (8.9)% | (30.2) | (8.8)% |
| Foreign tax law changes | (0.1) | —% | (6.5) | (1.5)% | — | —% |
| One-time impacts of U.S. tax reform | — | —% | — | —% | 5.3 | 1.5% |
| Uncertain tax positions | 8.3 | 1.8% | 1.9 | 0.4% | 4.6 | 1.3% |
| Valuation allowances | 8.3 | 1.8% | (0.7) | (0.2)% | (30.1) | (8.8)% |
| Foreign withholding taxes | 5.2 | 1.1% | 12.4 | 2.8% | 5.7 | 1.7% |
| U.S. Federal tax on foreign earnings | 4.9 | 1.1% | 12.0 | 2.7% | 6.6 | 1.9% |
| Other | 1.6 | 0.3% | 0.8 | 0.3% | 0.4 | 0.3% |
| Total | $ 100.2 | 22.0% | $ 83.9 | 19.0% | $ 54.5 | 15.9% |

For 2020, we reported a 22.0% effective tax rate, which is higher than the 21.0% U.S. federal corporate statutory rate due primarily to an increase in state taxes, valuation allowances on foreign tax credit carryforwards, and uncertain tax positions including related interest and penalties, partially offset by excess tax benefits on stock based compensation and foreign taxes in jurisdictions which have tax rates lower than the U.S. federal corporate statutory rate.

For 2019, we reported a 19.0% effective tax rate, which is lower than the 21.0% U.S. federal corporate statutory rate due primarily to excess tax benefits on stock based compensation, partially offset by U.S federal tax on foreign earnings and foreign taxes in jurisdictions which have tax rates that are higher than the U.S. federal corporate statutory rate. We elected to report Global Intangible Low Taxed Income ("GILTI") in income tax expense as part of the current income tax provision. We also changed our indefinite reinvestment assertion on our unremitted foreign earnings during the fourth quarter 2019, such that management intends to repatriate current year foreign earnings, net of working capital requirements, and indefinitely reinvest prior years' foreign earnings. The change in assertion had an immaterial impact on the current year effective tax rate.

For 2018, we reported a 15.9% effective tax rate, which is lower than the 21.0% U.S. federal statutory rate due primarily to the release of valuation allowances on foreign tax credit carryforwards and excess tax benefits on stock based compensation, partially offset by state taxes and foreign taxes in jurisdictions which have tax rates that are higher than the U.S. federal corporate statutory rate.

Components of net deferred income tax consisted of the following:

| (in millions) | December 31, 2020 | December 31, 2019 |
|---|---|---|
| Deferred income tax assets: | | |
| Compensation | $ 18.5 | $ 18.1 |
| Employee benefits | 15.1 | 13.2 |
| Legal reserves and settlements | 13.5 | 3.5 |
| Hedge investments | 22.2 | 12.7 |
| Loss and tax credit carryforwards | 130.1 | 114.2 |
| Leases | 17.5 | 19.9 |
| Other | 16.9 | 13.7 |
| Gross deferred income tax assets | 233.8 | 195.3 |
| Valuation allowance | (65.7) | (53.3) |
| Total deferred income tax assets, net | $ 168.0 | $ 142.0 |
| Deferred income tax liabilities: | | |
| Depreciation and amortization | $(520.5) | $(539.9) |
| Right of use asset | (16.1) | (18.5) |
| Taxes on unremitted foreign earnings | (10.8) | (11.4) |
| Financing related costs | (0.8) | (0.9) |
| Investment in affiliated companies | (4.6) | (4.9) |
| Other | (8.4) | (3.6) |
| Total deferred income tax liability | (561.4) | (579.2) |
| Net deferred income tax liability | $(393.3) | $(437.2) |

Deferred tax assets and liabilities result from temporary differences between tax and accounting methods. Our balance sheet includes a deferred tax asset of $3.4 million and $1.9 million at December 31, 2020 and 2019, respectively, which is included in other assets.

If certain deferred tax assets are not likely recoverable in future years a valuation allowance is recorded. As of December 31, 2020 and 2019, a valuation allowance of $65.7 million and $53.3 million, respectively, reduced deferred tax assets related to net operating losses and tax credit carryforwards. Our estimate of the amount of the deferred tax asset we can realize requires significant assumptions about projected revenues and income that are impacted by future market and economic conditions. U.S. federal net operating loss carryforwards expire over 12 to an indefinite number of years, foreign loss carryforwards over 1 to an indefinite number of years, foreign tax credit carryforwards over 10 years, interest expense carryforwards over an indefinite number of years, state net operating loss carryforwards over 1 to an indefinite number of years and state tax credit carryforwards over 1 to an indefinite number of years. As of December 31, 2020, the deferred tax assets associated with U.S. foreign tax credit carryforwards and U.S. federal net operating loss carryforwards were $68.0 million and $10.6 million, respectively. Deferred tax assets associated with foreign net operating loss carryforwards and foreign interest expense carryforwards were $18.6 million and $16.8 million, respectively. Deferred tax assets associated with other loss and tax credit carryforwards were not significant.

The total amount of gross unrecognized tax benefits as of December 31, 2020, 2019 and 2018 are $36.9 million, $32.8 million and $19.6 million, respectively. The amounts that would affect the effective tax rate if recognized are $18.5 million, $13.6 million and $12.3 million, respectively.

The total amount of gross unrecognized tax benefits consisted of the following:

| (in millions) | December 31, 2020 | December 31, 2019 | December 31, 2018 |
|---|---|---|---|
| Balance as of beginning of period | $32.8 | $19.6 | $12.3 |
| Increase in tax positions of prior years | 6.2 | 0.5 | 7.6 |
| Decrease in tax positions of prior years | (3.6) | (0.5) | (1.0) |
| Increase in tax positions of current year | 1.6 | 13.2 | 0.7 |
| Balance as of end of period | $36.9 | $32.8 | $19.6 |

We classify interest and penalties as income tax expense in the consolidated statements of income and their associated liabilities as other liabilities in the consolidated balance sheets. Interest and penalties on unrecognized tax benefits were $4.8 million for the year ended December 31, 2020, and not significant for the years ended December 31, 2019 and 2018.

We are regularly audited by federal, state and foreign taxing authorities. Given the uncertainties inherent in the audit process, it is reasonably possible that certain audits could result in a significant increase or decrease in the total amounts of unrecognized tax benefits. An estimate of the range of the increase or decrease in unrecognized tax benefits due to audit results cannot be made at this time. Tax years 2009 and forward remain open for examination in some foreign jurisdictions, 2011 and forward in some state jurisdictions, and 2012 and forward for U.S. federal purposes.

## 16. Stock-Based Compensation

For the years ended December 31, 2020, 2019 and 2018, we recognized stock-based compensation expense of $48.4 million, $58.1 million and $61.4 million, respectively, with related income tax benefits of approximately $9.0 million, $8.6 million and $14.9 million, respectively. Of the stock-based compensation expense recognized in 2020, 2019 and 2018, $1.6 million, $7.0 million and $3.5 million, respectively, was from cash-settleable awards.

Under the TransUnion Holding Company, Inc. 2012 Management Equity Plan (the "2012 Plan"), stock-based awards could be issued to executive officers, employees and independent directors of the Company. A total of 10.1 million shares were authorized for grant under the 2012 Plan. Effective upon the closing of the IPO, the Company's board of directors and its stockholders adopted the TransUnion 2015 Omnibus Incentive Plan, which has since been amended and restated (the "2015 Plan"), and no more shares can be issued under the 2012 Plan. During 2020, we increased the authorized shares available under the 2015 plan to a total of 12.4 million shares. The 2015 Plan provides for the granting of stock options, restricted stock and other stock-based or performance-based awards to key employees, directors or other persons having a service relationship with the Company and its affiliates. As of December 31, 2020, there were approximately 2.2 million of unvested awards outstanding and approximately 2.9 million of awards have vested under the 2015 Plan.

Effective upon the closing of the IPO, the Company's board of directors and its stockholders adopted the TransUnion 2015 Employee Stock Purchase Plan, which has since been amended and restated (the "ESPP"). A total of 2.4 million shares have been authorized to be issued under the ESPP. The ESPP provides certain employees of the Company with an opportunity to purchase the Company's common stock at a discount. As of December 31, 2020, the Company has issued approximately 0.9 million shares of common stock under the ESPP.

### *2012 Plan*

*Stock Options*

Stock options granted under the 2012 Plan have a 10 year term. For stock options granted to employees, 40% generally vest based on the passage of time (service condition options), and 60% generally vest based on the passage of time, subject to meeting certain stockholder return on investment conditions (market condition options). These stockholder return on investment conditions were satisfied in February 2017, and all remaining outstanding stock options now vest solely on the passage of time. All stock options granted to independent directors vest based on the passage of time.

Service condition options were valued using the Black-Scholes valuation model and vest over a 5 year service period, with 20% generally vesting one year after the grant date, and 5% vesting each quarter thereafter. Compensation costs for the service condition options are recognized on a straight-line basis over the requisite service period for the entire award. Market condition options were valued using a risk-neutral Monte Carlo valuation model, with assumptions similar to those used to value the service condition options, and vest over a 5 year service period now that the market conditions have been satisfied. There were no stock options granted during 2020, 2019, and 2018.

Stock option activity as of December 31, 2020 and 2019, and for the year ended December 31, 2020, consisted of the following:

| | Shares | Weighted Average Exercise Price | Weighted Average Remaining Contractual Term (in years) | Aggregate Intrinsic Value (in millions) |
|---|---|---|---|---|
| Outstanding as of December 31, 2019 | 1,462,096 | $ 7.96 | 3.5 | $113.5 |
| Granted | — | — | | |
| Exercised | (889,652) | 7.55 | | |
| Forfeited | (627) | 13.06 | | |
| Expired | — | — | | |
| Outstanding as of December 31, 2020 | 571,817 | 8.58 | 2.7 | $ 51.8 |
| Expected to vest as of December 31, 2020 | — | $ — | 0.0 | $ — |
| Exercisable as of December 31, 2020 | 571,817 | $ 8.58 | 2.7 | $ 51.8 |

As of December 31, 2020, there was no stock-based compensation expense remaining to be recognized in future years related to options. During 2020, cash received from the exercise of stock options was $6.7 million and the tax benefit realized from the exercise of stock options was $18.0 million.

The intrinsic value of options exercised and the fair value of options vested for the periods presented are as follows:

| (in millions) | Twelve Months Ended December 31, 2020 | 2019 | 2018 |
|---|---|---|---|
| Intrinsic value of options exercised | $71.1 | $106.4 | $134.4 |
| Total fair value of options vested | $ 4.5 | $ 7.4 | $ 10.3 |

***2015 Plan***

*Restricted Stock Units*

During 2020, 2019 and 2018, restricted stock units were granted under the 2015 Plan. Restricted stock units issued to date generally consist of: 50% service-based restricted stock units that vest based on passage of time and 50% performance-based awards consisting of performance-based restricted stock units that vest based on the passage of time, subject to meeting certain 3-year cumulative revenue and Adjusted EBITDA targets, and market-based restricted stock units that vest based on the passage of time, subject to meeting certain relative total stockholder return ("TSR") targets. For the performance awards, including the market-based performance awards, between zero and 200% of the units granted may eventually vest, based upon the final cumulative revenue and Adjusted EBITDA and TSR achievement relative to the targets over the 3-year measurement period. Restricted stock units generally vest 3 years from the grant date, subject to meeting any performance and market conditions. We occasionally issue off-cycle or special grants that could have performance measurements and vesting terms.

Service-based and performance-based restricted stock units are valued on the award grant date at the closing market price of our stock. Market-based awards are valued using a risk-neutral Monte-Carlo model, with assumptions similar to those used to value the 2012 Plan market-condition options, based on conditions that existed on the grant date of the award.

Restricted stock unit activity as of December 31, 2020 and 2019, and for the year ended December 31, 2020, consisted of the following:

| | Shares | Weighted Average Grant Date Fair Value | Weighted Average Remaining Contractual Term (in years) | Aggregate Intrinsic Value (in millions) |
|---|---|---|---|---|
| Outstanding as of December 31, 2019 | 2,387,088 | 59.39 | 1.2 | $204.4 |
| Granted | 1,140,065 | 84.76 | | |
| Vested | (1,049,880) | 45.12 | | |
| Forfeited | (289,324) | 69.88 | | |
| Outstanding as of December 31, 2020 | 2,187,949 | $78.85 | 1.0 | $217.1 |
| Expected to vest as of December 31, 2020 | 1,915,267 | $76.78 | 1.1 | $190.0 |

The fair value and intrinsic value of restricted stock units that vested during the year ended December 31, 2020 was $47.4 million and $101.7 million, respectively. As of December 31, 2020, stock-based compensation expense remaining to be recognized in future years related to restricted stock units that we currently expect to vest was $61.6 million, with weighted-average recognition periods of 1.8 years. During 2020, the tax benefit realized from vested restricted stock units was $15.4 million.

***Other***

We have certain other stock-based grants outstanding awarded to directors and employees of acquired companies. The shares expected to vest related to these awards are not material.

## 17. Fair Value

The following table summarizes financial instruments measured at fair value, on a recurring basis, as of December 31, 2020:

| (in millions) | Total | Level 1 | Level 2 | Level 3 |
|---|---|---|---|---|
| Assets | | | | |
| Available-for-sale debt securities (Note 2) | $ 3.2 | $— | $ 3.2 | $ — |
| Total | $ 3.2 | $— | $ 3.2 | $ — |
| Liabilities | | | | |
| Interest rate swaps (Note 9 and 10) | $ 89.7 | $— | $89.7 | $ — |
| Contingent consideration (Note 8 and 9) | 41.4 | — | — | 41.4 |
| Total | $131.1 | $— | $89.7 | $41.4 |

The following table summarizes financial instruments measured at fair value, on a recurring basis, as of December 31, 2019:

| (in millions) | Total | Level 1 | Level 2 | Level 3 |
|---|---|---|---|---|
| Assets | | | | |
| Available-for-sale debt securities (Note 2) | $ 2.9 | $— | $ 2.9 | $ — |
| Total | $ 2.9 | $— | $ 2.9 | $ — |
| Liabilities | | | | |
| Interest rate swaps (Note 9 and 10) | $46.6 | $— | $46.6 | $ — |
| Contingent consideration (Note 8 and 9) | 7.2 | — | — | 7.2 |
| Total | $53.8 | $— | $46.6 | $7.2 |

Level 2 instruments consist of foreign exchange-traded corporate bonds and interest rate swaps. Foreign exchange-traded corporate bonds are available-for-sale debt securities valued at their current quoted prices. These securities mature between 2027 and 2033. Unrealized gains and losses on available-for-sale debt securities, which are not material, are included in other comprehensive income. The interest rate swaps fair values are determined using the market standard methodology of discounting the future expected net cash receipts or payments that would occur if variable interest rates rise above or fall below the fixed rates of the swaps. The variable interest rates used in the calculations of projected receipts on the swaps are based on an expectation of future interest rates derived from observable market interest rate curves and volatilities.

Level 3 instruments are contingent consideration obligations related to companies we acquired with remaining maximum payouts totaling $44.4 million. These obligations are contingent upon meeting certain revenue performance metrics through March 31, 2021, with a portion of the payout due in 2022, and are included in other current liabilities and other liabilities on our balance sheet. The fair values of the obligations are determined based on an income approach, using our expectations of the future expected revenue of the acquired entities. We assess the fair value of these obligations each reporting period with any changes reflected as gains or losses in selling, general and administrative expenses in the consolidated statements of income. During 2020 and 2019, we increased this liability by $40.0 million and $7.6 million, respectively, as a result of new businesses we acquired in those years and also increased this liability by $1.6 million and $1.2 million, respectively, as a result of changes to the fair value of these obligations, with an offset to expense. During 2020 and 2019, we also paid $7.5 million and $2.8 million, respectively, to settle some of these obligations.

## 18. Reportable Segments

We have three reportable segments, U. S. Markets, International, and Consumer Interactive, and the Corporate unit, which provides support services to each of the segments. Our chief operating decision maker ("CODM") uses the profit measure of Adjusted EBITDA, on both a consolidated and a segment basis, to allocate resources and assess performance of our businesses. We use Adjusted EBITDA as our profit measure because it eliminates the impact of certain items that we do not consider indicative of operating performance, which is useful to compare operating results between periods. Our board of directors and executive management team also use Adjusted EBITDA as a compensation measure for both segment and corporate management under our incentive compensation plans. Adjusted EBITDA is also a measure frequently used by securities analysts, investors and other interested parties in their evaluation of the operating performance of companies similar to ours.

We define Adjusted EBITDA as net income (loss) attributable to each segment plus (less) loss (income) from discontinued operations, plus net interest expense, plus (less) provision (benefit) for income taxes, plus depreciation and amortization, plus (less) certain acquisition-related deferred revenue adjustments, plus stock-based compensation, plus mergers, acquisitions, divestitures and business optimization-related expenses including Callcredit integration-related expenses, plus certain accelerated technology investment expenses to migrate to the cloud, plus (less) certain other expenses (income).

The segment financial information below aligns with how we report information to our CODM to assess operating performance and how we manage the business. The accounting policies of the segments are the same as described in Note 1, "Significant Accounting and Reporting Policies" and Note 13, "Revenue."

The following is a more detailed description of our three reportable segments and the Corporate unit, which provides support services to each segment:

***U.S. Markets***

The U.S. Markets segment provides consumer reports, actionable insights and analytics such as credit and other scores, and solutions capabilities to businesses. These businesses use our services to acquire new customers, assess consumers' ability to pay for services, identify cross-selling opportunities, measure and manage debt portfolio risk, collect debt, verify consumer identities and investigate potential fraud. The core capabilities and delivery methods in our U.S. Markets segment allow us to serve a broad set of customers across industries. We report disaggregated revenue of our U.S. Markets segment for Financial Services and Emerging Verticals.

- ***Financial Services:*** The Financial Services vertical, which accounts for 55.4% of our 2020 U.S. Markets revenue, consists of our consumer lending, mortgage, auto and cards and payments lines of business. Our Financial Services clients consist of most banks, credit unions, finance companies, auto lenders, mortgage lenders, online-only lenders (FinTech), and other consumer lenders in the United States. We also distribute our solutions through most major resellers, secondary market players and sales agents. Beyond traditional lenders, we work with a variety of credit arrangers, such as auto dealers and peer-to-peer lenders. We provide solutions across every aspect of the lending lifecycle; customer acquisition and engagement, fraud and ID management, retention and recovery. Our products are focused on mitigating risk and include credit reporting, credit marketing, analytics and consulting, identity verification and authentication and debt recovery solutions.
- ***Emerging Verticals:*** Emerging Verticals include Healthcare, Insurance, Tenant and Employment, Collections, Public Sector, Media, Diversified Markets and other verticals. Our solutions in these verticals are also data-driven and address the entire customer lifecycle. We offer onboarding and transaction processing products, scoring and analytic products, marketing solutions, fraud and identity management solutions and customer retention solutions.

***International***

The International segment provides services similar to our U.S. Markets segment to businesses in select regions outside the United States. Depending on the maturity of the credit economy in each country, services may include credit reports, analytics and solutions services, and other value-added risk management services. In addition, we have insurance, business and automotive databases in select geographies. These services are offered to customers in a number of industries including financial services, insurance, automotive, collections, and communications, and are delivered through both direct and indirect channels. The International segment also provides consumer services similar to those offered by our Consumer Interactive segment that help consumers proactively manage their personal finances and take precautions against identity theft.

We report disaggregated revenue of our International segment for the following regions: Canada, Latin America, the United Kingdom, Africa, India, and Asia Pacific.

***Consumer Interactive***

The Consumer Interactive segment provides solutions that help consumers manage their personal finances and take precautions against identity theft. Services in this segment include credit reports and scores, credit monitoring, fraud protection and resolution, and financial management for consumers. The segment also provides solutions that help businesses respond to data breach events. Our products are provided through user-friendly online and mobile interfaces and are supported by educational content and customer support. Our Consumer Interactive segment serves consumers through both direct and indirect channels.

### *Corporate*

Corporate provides support services for each of the segments, holds investments, and conducts enterprise functions. Certain costs incurred in Corporate that are not directly attributable to one or more of the segments remain in Corporate. These costs are typically enterprise-level costs and are primarily administrative in nature.

Selected segment financial information and disaggregated revenue consisted of the following:

| | Twelve Months Ended December 31, | | |
|---|---|---|---|
| **(in millions)** | **2020** | **2019** | **2018** |
| **Gross Revenue:** | | | |
| **U.S. Markets:** | | | |
| Financial Services | $ 939.6 | $ 849.0 | $ 765.1 |
| Emerging Verticals | 757.0 | 760.6 | 679.6 |
| **Total U.S. Markets** | 1,696.6 | 1,609.6 | 1,444.7 |
| **International:** | | | |
| Canada | 108.0 | 104.1 | 96.0 |
| Latin America | 86.5 | 104.2 | 102.3 |
| United Kingdom | 183.1 | 186.7 | 71.3 |
| Africa | 49.0 | 61.2 | 64.2 |
| India | 100.0 | 108.1 | 81.8 |
| Asia Pacific | 56.2 | 59.1 | 56.7 |
| **Total International** | 582.7 | 623.5 | 472.4 |
| **Total Consumer Interactive** | 513.1 | 497.8 | 475.8 |
| **Total revenue, gross** | $2,792.5 | $2,730.9 | $2,392.9 |
| **Intersegment revenue eliminations:** | | | |
| U.S. Markets | $ (68.9) | $ (68.7) | $ (70.0) |
| International | (5.2) | (5.1) | (5.1) |
| Consumer Interactive | (1.7) | (1.0) | (0.7) |
| **Total intersegment eliminations** | (75.9) | (74.8) | (75.7) |
| **Total revenues as reported** | $2,716.6 | $2,656.1 | $2,317.2 |

As a result of displaying amounts in millions, rounding differences may exist in the tables above and below.

A reconciliation of Segment Adjusted EBITDA to income from continuing operations before taxes for the periods presented is as follows:

| | Twelve Months Ended December 31, | | |
|---|---|---|---|
| **(in millions)** | **2020** | **2019** | **2018** |
| U.S. Markets Adjusted EBITDA | $ 682.5 | $ 664.2 | $ 576.1 |
| International Adjusted EBITDA | 219.8 | 258.1 | 193.0 |
| Consumer Interactive Adjusted EBITDA | 247.6 | 248.4 | 237.6 |
| Total | 1,149.9 | 1,170.7 | 1,006.8 |
| Adjustments to reconcile to income from continuing operations before income taxes: | | | |
| Corporate expenses[1] | (105.0) | (111.8) | (89.8) |
| Net interest expense | (120.7) | (166.1) | (132.0) |
| Depreciation and amortization | (367.9) | (362.1) | (306.9) |
| Acquisition-related revenue adjustments[2] | — | (5.9) | (28.1) |
| Stock-based compensation[3] | (48.4) | (58.1) | (61.4) |
| Mergers and acquisitions, divestitures and business optimization[4] | (9.7) | (1.7) | (38.7) |
| Accelerated technology investment[5] | (19.3) | — | — |
| Other[6] | (35.5) | (29.7) | (17.2) |
| Net (income attributable to non-controlling interests | 12.4 | 5.1 | 10.9 |
| Total adjustments | (694.1) | (730.2) | (663.2) |
| **Income from continuing operations before income taxes** | $ 455.8 | $ 440.5 | $ 343.5 |

As a result of displaying amounts in millions, rounding differences may exist in the table above.

(1) Certain costs that are not directly attributable to one or more of the segments remain in Corporate. These costs are typically enterprise-level costs and are primarily administrative in nature.

(2) This adjustment represents certain non-cash adjustments related to acquired entities, predominantly adjustments to increase revenue resulting from purchase accounting reductions to deferred revenue we record on the opening balance sheets of acquired entities. Deferred revenue results when a company receives payment in advance of fulfilling their performance obligations under contracts. Business combination accounting rules require us to record deferred revenue of acquired entities at fair value if we are obligated to perform any future services under these contracts. The fair value of this deferred revenue is determined based on the direct and indirect incremental costs of fulfilling our performance obligations under these contracts, plus a normal profit margin. Generally, this fair value calculation results in a reduction to the purchased deferred revenue balance. The above adjustment includes an estimate for the increase in revenue equal to the difference between what the acquired entities would have recorded as revenue and the lower revenue we record as a result of the reduced deferred revenue balance. This increase is partially offset by an estimated decrease to revenue for certain acquired non-core customer contracts that are not classified as discontinued operations that will expire within approximately one year from the date of acquisition. Beginning in the third quarter of 2019, we no longer have these adjustments to revenue.

(3) Consisted of stock-based compensation and cash-settled stock-based compensation.

(4) For the twelve months ended December 31, 2020, consisted of the following adjustments: $8.3 million of acquisition expenses; $7.5 million of Callcredit integration costs; a $4.8 million loss on the impairment of a Cost Method investment; $1.6 million of adjustments to contingent consideration expense from previous acquisitions; an ($8.1) million remeasurement gain on notes receivable that were converted into equity upon acquisition and consolidation of an entity; a ($2.5) million gain on a Cost Method investment resulting from

an observable price change for a similar investment of the same issuer; a ($1.8) million gain on the disposal of assets of a small business in our United Kingdom region; and a ($0.1) million reimbursement for transition services provided to the buyers of certain of our discontinued operations.

For the twelve months ended December 31, 2019, consisted of the following adjustments: a $(31.2) million gain on a Cost Method investment resulting from an observable price change for a similar investment of the same issuer; a $(0.5) million reimbursement for transition services provided to the buyers of certain of our discontinued operations; $15.8 million of Callcredit integration costs; a $10.0 million loss on the impairment of certain Cost Method investments; a $3.7 million loss on assets of a small business in our United Kingdom region that are classified as held-for-sale; $2.6 million of acquisition expenses; and a $1.2 million adjustment to contingent consideration expense from previous acquisitions.

For the twelve months ended December 31, 2018, consisted of the following adjustments: $29.3 million of acquisition expenses; $6.8 million of Callcredit integration costs; a $2.3 million loss on the divestiture of a small business operation; a $0.4 million adjustment to contingent consideration expense from previous acquisitions; and $(0.1) million of miscellaneous.

(5) Represents expenses associated with our accelerated technology investment to migrate to the cloud

(6) For the twelve months ended December 31, 2020, consisted of the following adjustments: $34.7 million for certain legal expenses; $1.6 million of loan fees; $0.9 million of deferred loan fees written off as a result of the prepayments on our debt; $0.2 million loss from currency remeasurement of our foreign operations; $0.2 million of fees related to our new swap agreements; a $(1.5) million recovery from the Fraud Incident, net of additional administrative expense; $(0.4) million reimbursement of fees associated with the refinancing of our Senior Secured Credit Facility; and $(0.2) million of other.

For the twelve months ended December 31, 2019, consisted of the following adjustments: $20.8 million of expenses (including $3.0 million of administrative expenses) associated with the Fraud Incident offset by the $(7.3) million portion that is attributable to the non-controlling interest; $13.0 million of fees related to the refinancing of senior secured credit facility; $2.0 million of deferred loan fees written off as a result of the prepayments on our debt; $2.0 million of loan fees; and a $0.1 million loss from currency remeasurement; a $(0.7) million reduction to expense for certain legal and regulatory matters; and $(0.1) million of miscellaneous.

For the twelve months ended December 31, 2018, consisted of the following adjustments: $12.0 million of fees related to new financing under our senior secured credit facility; a $3.8 million loss from currency remeasurement; $1.6 million of loan fees; $0.5 million of fees incurred in connection with a secondary offering of shares of TransUnion common stock by certain of our stockholders; and a $(0.7) million mark-to-market gain related to ineffectiveness of our interest rate hedge.

Earnings from equity method investments included in non-operating income and expense was as follows:

| | Twelve Months Ended December 31, | | |
|---|---|---|---|
| **(in millions)** | **2020** | **2019** | **2018** |
| U.S. Markets | $2.6 | $ 2.6 | $2.6 |
| International | 6.4 | 10.6 | 7.3 |
| Total | $8.9 | $13.2 | $9.9 |

Total assets, by segment, consisted of the following:

| (in millions) | December 31, 2020 | December 31, 2019 |
|---|---|---|
| U.S. Markets | $3,606.1 | $3,520.9 |
| International | 2,974.5 | 3,025.4 |
| Consumer Interactive | 458.9 | 465.5 |
| Corporate | 272.0 | 101.4 |
| Total | $7,311.6 | $7,113.2 |

Cash paid for capital expenditures, by segment, was as follows:

| | Twelve Months Ended December 31, | | |
|---|---|---|---|
| (in millions) | 2020 | 2019 | 2018 |
| U.S. Markets | $127.6 | $122.1 | $122.7 |
| International | 68.2 | 59.8 | 44.1 |
| Consumer Interactive | 12.8 | 13.4 | 11.2 |
| Corporate | 5.5 | 3.2 | 2.1 |
| Total | $214.1 | $198.5 | $180.1 |

Depreciation and amortization expense by segment was as follows:

| | Twelve Months Ended December 31, | | |
|---|---|---|---|
| (in millions) | 2020 | 2019 | 2018 |
| U.S. Markets | $226.9 | $225.0 | $191.2 |
| International | 120.6 | 118.6 | 98.4 |
| Consumer Interactive | 14.6 | 13.3 | 12.2 |
| Corporate | 5.7 | 5.2 | 5.1 |
| Total | $367.9 | $362.1 | $306.9 |

Percentage of revenue based on where it was earned, was as follows:

| | Twelve Months Ended December 31, | | |
|---|---|---|---|
| | 2020 | 2019 | 2018 |
| Domestic | 79% | 77% | 80% |
| International | 21% | 23% | 20% |

Percentage of long-lived assets, other than financial instruments and deferred tax assets, based on the location of the legal entity that owns the asset, was as follows:

| | As of December 31, | | |
|---|---|---|---|
| | 2020 | 2019 | 2018 |
| Domestic | 59% | 59% | 60% |
| International | 41% | 41% | 40% |

## 19. Commitments

Future minimum payments for noncancelable operating leases, purchase obligations and other liabilities in effect as of December 31, 2020, are payable as follows:

| (in millions) | Operating Leases | Purchase Obligations and Other | Total |
|---|---|---|---|
| 2021 | $18.5 | $322.1 | $340.6 |
| 2022 | 16.9 | 53.3 | 70.2 |
| 2023 | 14.7 | 24.3 | 39.0 |
| 2024 | 11.3 | 12.6 | 23.9 |
| 2025 | 8.8 | 10.3 | 19.1 |
| Thereafter | 13.9 | 0.3 | 14.2 |
| Totals | $84.1 | $422.9 | $507.0 |

Purchase obligations and other includes $193.2 million of trade accounts payable that were included in our balance sheet as of December 31, 2020. Purchase obligations and other include commitments for outsourcing services, royalties, data licenses, and maintenance and other operating expenses.

### *Licensing agreements*

We have agreements with Fair Isaac Corporation to license credit-scoring algorithms and the right to sell credit scores derived from those algorithms. Payment obligations under these agreements vary due to factors such as the volume of credit scores we sell, what type of credit scores we sell, and how our customers use the credit scores. There are no minimum payments required under these licensing agreements. However, we do have a significant level of sales volume related to these credit scores.

## 20. Contingencies

### Legal and Regulatory Matters

In addition to the matters described below, we are routinely named as defendants in, or parties to, various legal actions and proceedings relating to our current or past business operations. These actions generally assert claims for violations of federal or state credit reporting, consumer protection or privacy laws, or common law claims related to the unfair treatment of consumers, and may include claims for substantial or indeterminate compensatory or punitive damages, or injunctive relief, and may seek business practice changes. We believe that most of these claims are either without merit or we have valid defenses to the claims, and we vigorously defend these matters or seek non-monetary or small monetary settlements, if possible. However, due to the uncertainties inherent in litigation, we cannot predict the outcome of each claim in each instance.

In the ordinary course of business, we also are subject to governmental and regulatory examinations, information-gathering requests, investigations and proceedings (both formal and informal), certain of which may result in adverse judgments, settlements, fines, penalties, injunctions or other relief. In connection with formal and informal inquiries by these regulators, we routinely receive requests, subpoenas and orders seeking documents, testimony, and other information in connection with various aspects of our activities.

In view of the inherent unpredictability of legal and regulatory matters, particularly where the damages sought are substantial or indeterminate or when the proceedings or investigations are in the early stages, we cannot determine with any degree of certainty the timing or ultimate resolution of legal and regulatory matters or the eventual loss, fines, penalties or, if any, that may result. We establish reserves for legal and regulatory matters when those matters present loss contingencies that are both probable and can be reasonably estimated. However, for certain of the matters described below, we are not able to reasonably estimate our exposure because damages have not been specified and (i) the proceedings are in early stages, (ii) there is uncertainty as to the likelihood of a class being certified or the ultimate size of the class, (iii) there is uncertainty as to the outcome of similar matters pending against our competitors, (iv) there are significant factual issues to be resolved, and/or (v) there are legal issues of a first impression being presented. The actual costs of resolving legal and regulatory matters, however, may be substantially higher than the amounts reserved for those matters, and an adverse outcome in certain of these matters could have a material adverse effect on our consolidated financial statements in particular quarterly or annual periods. We accrue amounts for certain legal and regulatory matters for which losses were considered to be probable of occurring based on our best estimate of the most likely outcome. It is reasonably possible actual losses could be significantly different from our current estimates. In addition, there are some matters for which it is reasonably possible that a loss will occur, however we cannot estimate a range of the potential losses for these matters. Legal fees incurred in connection with ongoing litigation are considered a period cost and are expensed as incurred.

To reduce our exposure to an unexpected significant monetary award resulting from an adverse judicial decision, we maintain insurance that we believe is appropriate and adequate based on our historical experience. We regularly advise our insurance carriers of the claims (threatened or pending) against us in the course of litigation and generally receive a reservation of rights letter from the carriers when such claims exceed applicable deductibles. We are not aware of any significant monetary claim that has been asserted against us in the course of pending litigation that would not have some level of coverage by insurance after the relevant deductible, if any, is met.

As of December 31, 2020 and 2019, we accrued $76.0 million and $30.4 million, respectively, for anticipated claims. These amounts were recorded in other accrued liabilities in the consolidated balance sheets and the associated expenses were recorded in selling, general and administrative expenses in the consolidated statements of income. Legal fees incurred in connection with ongoing litigation are considered period costs and are expensed as incurred.

***Ramirez v. Trans Union LLC***

As a result of a decision by the United States Third Circuit Court of Appeals (Cortez v. Trans Union LLC) in 2010, we modified one of our add-on services we offer to our business customers that was designed to alert our customer that the consumer, who was seeking to establish a business relationship with the customer, may potentially be on the Office of Foreign Assets Control, Specifically Designated National and Blocked Persons alert list (the "OFAC Alert"). The OFAC Alert service is meant to assist our customers with their compliance obligations in connection with the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism (USA PATRIOT) Act of 2001.

In Ramirez v. Trans Union LLC filed in 2012, the plaintiff alleged that the OFAC Alert service did not comply with the Cortez ruling and that we willfully violated the Fair Credit Reporting Act ("FCRA") by continuing to offer the OFAC Alert service. The plaintiff also alleged that there are one or more classes of individuals who should be entitled to statutory damages based on the allegedly willful violations. In July 2014, the trial Court in Ramirez certified a class of approximately 8,000 individuals solely for purposes of statutory damages if TransUnion is ultimately found to have willfully violated the FCRA.

On June 21, 2017, the jury in Ramirez returned a verdict in favor of a class of 8,185 individuals in the amount of approximately $8.1 million ($984.22 per class member) in statutory damages and approximately $52.0 million ($6,353.08 per class member) in punitive damages. In November 2017, the trial court denied our post-trial motions for judgment as a matter of law, a new trial and a reduction on the jury verdict. We appealed the Ramirez ruling to the United States Court of Appeals for the Ninth Circuit.

On February 27, 2020, the Ninth Circuit affirmed in part and reversed and vacated in part the trial court's judgment, holding that the punitive damages award was excessive in violation of constitutional due process. The appeals court remanded the case to the trial court with instructions to reduce the punitive damages award from approximately $52.0 million ($6,353.08 per class member) to approximately $32.0 million ($3,936.88 per class member). On April 8, 2020, the Ninth Circuit denied our petition for rehearing *en banc*. At that time, we determined that punitive damages were probable and reasonably estimable and recorded an estimated liability at March 31, 2020, in an amount equal to the portion of the punitive damages award affirmed by the Ninth Circuit and a partially offsetting insurance receivable, with expense of $30.5 million ($22.9 million net of tax) recorded in selling, general and administrative expense. We recorded an additional reserve for this matter in the third quarter of 2020.

On September 2, 2020, we filed a Petition for *Certiorari* with the United States Supreme Court. On December 16, 2020, the United States Supreme Court granted the Petition for *Certiorari* with respect to whether Article III of the United States Constitution or Rule 23 of the Federal Rules of Civil Procedure permit a damages class action where the vast majority of the class suffered no actual injury, let alone an injury anything like what the class representative suffered. Oral argument is scheduled for March 30, 2021, with a ruling expected to be issued by June 30, 2021.

As of December 31, 2020, we have accrued a liability for this matter based on currently available information and our estimate of probable loss. The outcome of the ultimate resolution of this matter is uncertain and our actual loss could be significantly different from the amount accrued.

## 21. Related-Party Transactions

### *Data and Data Services*

From February 15, 2012 through March 8, 2018, investment funds affiliated with Goldman, Sachs & Co. (“GS”) owned at least 10% of our outstanding common stock and had a least one designee serving on our board of directors. GS is no longer a related party after March 8, 2018. In 2018, we entered into a series of transactions with affiliates of GS to license data and provide data services that we offer to all of our business customers. In connection with these transactions, we received aggregate fees of approximately $10.5 million.

### *Debt and Hedge Activities*

There were no material related party debt and hedge transactions or balances outstanding for the reported periods.

### *Associated Organizations of Directors and Executive Officers*

There were no material related party transactions or balances outstanding for the reported periods.

## 22. Acquisitions

Over the past 3 years, we have acquired 100% of the equity of several businesses, including Tru Optik Data Corp (“Tru Optik”) and Signal Digital, Inc. (“Signal”) in 2020, TruSignal, Inc. (“TruSignal”) in 2019, and Callcredit Information Group, Ltd. (“Callcredit”), iovation, Inc. (“iovation”), Healthcare Payment Specialists, LLC (“HPS”) and Rubixis, Inc. (“Rubixis”) in 2018. The results of operations of Tru Optik, Signal, TruSignal, iovation, HPS and Rubixis, which are not material to our consolidated financial statements, have been included as part of our U.S. Markets reportable segment in our consolidated statements of income since the date of each of the acquisitions. The purchase price for each of our 2020 acquisitions has been preliminarily allocated to assets acquired and liabilities assumed based on the estimated fair values as of the acquisition date and is subject to adjustments in subsequent periods once the allocations are finalized, no later than one year from the acquisition date.

*Callcredit Acquisition*

On June 19, 2018, we acquired Callcredit Information for $1,408.2 million in cash, funded primarily by additional borrowings against our Senior Secured Credit Facility.

Callcredit's revenue and operating income have been included as part of the International segment in the accompanying consolidated statements of income since the date of acquisition, including revenue of $71.3 million and an operating loss of $28.2 million in 2018.

For the twelve months ended December 31, 2018, on a pro-forma basis assuming the transaction occurred on January 1, 2017, combined pro-forma revenue of TransUnion and Callcredit was $2,405.0 million, and combined pro-forma net income from continuing operations was $267.5 million. For the twelve months ended December 31, 2018, combined pro-forma net income from continuing operations was adjusted to exclude $19.4 million of acquisition-related costs and $9.4 million of financing costs expensed in 2018.

In 2018, we incurred $19.4 million of acquisition-related cost associated with Callcredit. These costs included investment banker fees, legal fees, due diligence and other external costs that we have recorded in other income and expense.

## 23. Quarterly Financial Data (Unaudited)

The quarterly financial data for 2020 and 2019 consisted of the following:

| | Three Months Ended | | | |
|---|---|---|---|---|
| **(in millions)** | **December 31, 2020[1]** | **September 30, 2020[1]** | **June 30, 2020[1]** | **March 31, 2020[1,2]** |
| Revenue | $698.6 | $695.9 | $634.4 | $687.6 |
| Operating income | 144.9 | 162.3 | 123.9 | 136.8 |
| Income from continuing operations | 104.5 | 106.7 | 70.0 | 74.3 |
| Net income | 104.5 | 106.7 | 70.0 | 74.3 |
| Net income attributable to TransUnion | 101.7 | 102.8 | 68.5 | 70.2 |
| **Basic earnings per common share from:** | | | | |
| Income from continuing operations attributable to TransUnion | $ 0.53 | $ 0.54 | $ 0.36 | $ 0.37 |
| Net Income attributable to TransUnion | $ 0.53 | $ 0.54 | $ 0.36 | $ 0.37 |
| **Diluted earnings per common share from:** | | | | |
| Income from continuing operations attributable to TransUnion | $ 0.53 | $ 0.53 | $ 0.36 | $ 0.37 |
| Net Income attributable to TransUnion | $ 0.53 | $ 0.53 | $ 0.36 | $ 0.37 |

| (in millions) | Three Months Ended December 31, 2019[3] | September 30, 2019[4] | June 30, 2019[5] | March 31, 2019 |
|---|---|---|---|---|
| Revenue | $685.6 | $689.3 | $661.9 | $619.3 |
| Operating income | 154.7 | 171.3 | 159.7 | 122.1 |
| Income from continuing operations | 86.5 | 88.3 | 107.0 | 74.9 |
| Net income | 86.5 | 88.3 | 104.0 | 73.4 |
| Net income attributable to TransUnion | 82.9 | 91.7 | 101.5 | 70.9 |
| **Basic earnings per common share from:** | | | | |
| Income from continuing operations attributable to TransUnion | $ 0.44 | $ 0.49 | $ 0.56 | $ 0.39 |
| Net Income attributable to TransUnion | $ 0.44 | $ 0.49 | $ 0.54 | $ 0.38 |
| **Diluted earnings per common share from:** | | | | |
| Income from continuing operations attributable to TransUnion | $ 0.43 | $ 0.48 | $ 0.55 | $ 0.38 |
| Net Income attributable to TransUnion | $ 0.43 | $ 0.48 | $ 0.53 | $ 0.37 |

As a result of displaying amounts in millions, rounding differences compared to the annual totals may exist in the table above.

1 Since mid-March 2020, the COVID-19 pandemic, widespread measures implemented to contain its effects, and business and consumer responses to such measures, have had a material and adverse impact on numerous aspects of our business, including customer demand for our services and solutions in all of our segments.

2 Operating income, income from continuing operations, net income and net income attributable to TransUnion all include $30.5 million for certain legal expenses.

3 Income from continuing operations, net income and net income attributable to TransUnion all include $13.0 million of fees related to the refinancing of our senior secured credit facility.

4 Income from continuing operations and net income all include $19.7 million of expenses associated with the Fraud Incident. Net income attributable to TransUnion includes $19.7 million of expenses associated with the Fraud Incident offset by the $7.1 million portion attributable to the non-controlling interest.

5 Income from continuing operations, net income and net income attributable to TransUnion all include a net gain of $27.9 million on a Cost Method investments resulting from observable price changes for a similar investment of the same issuers.

## 24. Accumulated Other Comprehensive Loss

The following table sets forth the changes in each component of accumulated other comprehensive loss, net of tax:

| (in millions) | Foreign Currency Translation Adjustment | Net Unrealized Gain/(Loss) On Hedges | Net Unrealized Gain/(Loss) On Available-for-sale Securities | Accumulated Other Comprehensive Loss |
|---|---|---|---|---|
| Balance, December 31, 2017 | $(134.5) | $ (1.0) | $0.2 | $(135.3) |
| Change | (145.1) | (2.3) | — | (147.4) |
| Balance, December 31, 2018 | $(279.6) | $ (3.3) | $0.2 | $(282.7) |
| Change | 65.0 | (33.9) | — | 31.1 |
| Balance, December 31, 2019 | $(214.6) | $(37.2) | $0.2 | $(251.6) |
| Change | 9.2 | (29.9) | 0.2 | (20.5) |
| Balance, December 31, 2020 | $(205.4) | $(67.1) | $0.4 | $(272.1) |

## ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

## ITEM 9A. CONTROLS AND PROCEDURES

### Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report. The term "disclosure controls and procedures" as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms.

Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate, to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on the evaluation of our disclosure controls and procedures as of the end of the period covered by this report, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

### Management’s Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. TransUnion’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. Internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of TransUnion;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles;
- provide reasonable assurance that receipts and expenditures of TransUnion are being made only in accordance with the authorizations of management and directors of TransUnion; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of assets that could have a material effect on the consolidated financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of TransUnion’s internal control over financial reporting as of December 31, 2020. In making this assessment, management used the criteria described in *Internal Control—Integrated Framework* as issued by the Committee of Sponsoring Organizations of the Treadway Commission in 2013. Based on our assessment, management has concluded that, as of December 31, 2020, TransUnion’s internal control over financial reporting was effective based on those criteria. Our independent registered public accounting firm, PricewaterhouseCoopers LLP, has audited the effectiveness of TransUnion’s internal control over financial reporting as of December 31, 2020, as stated in their report which is included in this Annual Report on Form 10-K.

### Changes in internal control over financial reporting

During the quarter ended December 31, 2020, there have been no changes in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

## ITEM 9B. OTHER INFORMATION

None.

## PART III

### ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this item is incorporated by reference to our Proxy Statement for the 2021 Annual Meeting of Stockholders to be held on May 11, 2021, which will be filed with the SEC within 120 days of the end of our fiscal year ended December 31, 2020.

***Code of Business Conduct and Ethics***

We have adopted a Code of Business Conduct and Ethics that applies to all directors, officers and employees. Our Code of Business Conduct and Ethics is available in the "Investor Relations" section of our website at www.transunion.com, under the tab "Leadership and Governance," and a copy of the Code of Business Conduct and Ethics may also be obtained free of charge upon a request directed to TransUnion, 555 West Adams Street, Chicago, Illinois 60661, Attn: Corporate Secretary. Our Code of Business Conduct and Ethics is a "code of ethics," as defined in Item 406(b) of Regulation S-K. We will make any legally required disclosures regarding amendments to, or waivers of, provisions of our code of ethics on our website.

### ITEM 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated by reference to our Proxy Statement for the 2021 Annual Meeting of Stockholders to be held on May 11, 2021, which will be filed with the SEC within 120 days of the end of our fiscal year ended December 31, 2020.

### ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this item is incorporated by reference to our Proxy Statement for the 2021 Annual Meeting of Stockholders to be held on May 11, 2021, which will be filed with the SEC within 120 days of the end of our fiscal year ended December 31, 2020.

### ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item is incorporated by reference to our Proxy Statement for the 2021 Annual Meeting of Stockholders to be held on May 11, 2021, which will be filed with the SEC within 120 days of the end of our fiscal year ended December 31, 2020.

### ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this item is incorporated by reference to our Proxy Statement for the 2021 Annual Meeting of Stockholders to be held on May 11, 2021, which will be filed with the SEC within 120 days of the end of our fiscal year ended December 31, 2020.

## PART IV

### ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) **List of Documents Filed as a Part of This Report:**

(1) *Financial Statements*. The following financial statements are included in Item 8 of Part II:

- Consolidated Balance Sheets—December 31, 2020 and 2019;
- Consolidated Statements of Income for the years ended December 31, 2020, 2019 and 2018;
- Consolidated Statements of Comprehensive Income for the years ended December 31, 2020, 2019 and 2018;
- Consolidated Statements of Cash Flows for the years ended December 31, 2020, 2019 and 2018;
- Consolidated Statements of Stockholders' Equity for the years ended December 31, 2020, 2019 and 2018;
- Notes to Consolidated Financial Statements.

(2) *Financial Statement Schedules.*

- Schedule I—Condensed Financial Information of TransUnion as of December 31, 2020 and 2019, and for the years ended December 31, 2020, 2019 and 2018 and the accompanying notes; and
- Schedule II—Valuation and Qualifying Accounts for the years ended December 31, 2020, 2019 and 2018.

Schedules I and II are filed as part of this Report and are set forth immediately following the signature page.

(3) The following exhibits are filed with this Annual Report on Form 10-K for the fiscal year ended December, 31, 2020, or incorporated herein by reference.

| Exhibit No. | Exhibit Name |
|---|---|
| 3.1 | Third Amended and Restated Certificate of Incorporation of TransUnion (Incorporated by reference to Exhibit 3.1.2 to TransUnion's Current Report on Form 8-K filed on May 18, 2020). |
| 3.2 | Third Amended and Restated Bylaws of TransUnion (Amended as of May 12, 2020) (Incorporated by reference to Exhibit 3.2 to TransUnion's Current Report on Form 8-K filed on May 18, 2020). |
| 4.1 | Form of Stock Certificate for Common Stock (Incorporated by reference to Exhibit 4.6 to TransUnion's Amendment No. 3 to Registration Statement on Form S-1 filed on June 15, 2015). |
| 4.2** | Description of TransUnion's securities. |
| 10.1 | Third Amended and Restated Credit Agreement, dated as of August 9, 2017, by and among TransUnion Intermediate Holdings, Inc., Trans Union LLC, the guarantors party thereto, Deutsche Bank AG New York Branch, as Administrative Agent and as Collateral Agent, Deutsche Bank AG New York Branch, as L/C Issuer, the other lenders from time to time party thereto and Deutsche Bank Securities, Inc., Capital One, N.A., Goldman Sachs Lending Partners LLC, JP Morgan Chase Bank, N.A., Merrill Lynch, Pierce, Fenner & incorporated, RBC Capital Markets and Wells Fargo Securities, LLC, as joint lead arrangers and joint bookrunners (Incorporated by reference to Exhibit 10.1 to TransUnion's Quarterly Report on Form 10-Q filed on October 27, 2017). |
| 10.2 | Amendment No. 14 to Credit Agreement, dated as of May 2, 2018, by and among TransUnion Intermediate Holdings, Inc. (f/k/a TransUnion Corp.), Trans Union LLC, the Guarantors, Deutsche Bank Securities Inc., Capital One, N.A., Merrill Lynch, Pierce, Fenner & Smith Incorporated and RBC Capital Markets, as joint lead arrangers, Deutsche Bank AG New York Branch, as administrative agent and collateral agent, and each of the other Lenders party thereto (Incorporated by reference to Exhibit 10.1 to TransUnion's Quarterly Report on Form 10-Q filed on July 25, 2018). |
| 10.3 | Amendment No. 15 to Credit Agreement, dated as of June 19, 2018, by and among TransUnion Intermediate Holdings, Inc. (f/k/a TransUnion Corp.), Trans Union LLC, the Guarantors, Deutsche Bank Securities Inc., RBC Capital Markets, Merrill Lynch, Pierce, Fenner & Smith Incorporated and Capital One, N.A., as joint lead arrangers, Deutsche Bank AG New York Branch, as administrative agent and collateral agent, and each of the other Lenders party thereto (Incorporated by reference to Exhibit 10.2 to TransUnion's Quarterly Report on Form 10-Q filed on July 25, 2018). |
| 10.4 | Amendment No. 16 to Credit Agreement, dated as of June 29, 2018, by and among TransUnion Intermediate Holdings, Inc. (f/k/a TransUnion Corp.), Trans Union LLC, the Guarantors, Deutsche Bank Securities Inc., RBC Capital Markets, Merrill Lynch, Pierce, Fenner & Smith Incorporated and Capital One, N.A., as joint lead arrangers, Deutsche Bank AG New York Branch, as administrative agent and collateral agent, and each of the other Lenders party thereto (Incorporated by reference to Exhibit 10.3 to TransUnion's Quarterly Report on Form 10-Q filed on July 25, 2018). |
| 10.5 | Amendment No. 17 to Credit Agreement, dated as of November 15, 2019, by and among TransUnion Intermediate Holdings, Inc. (f/k/a TransUnion Corp.), Trans Union LLC, the Guarantors, Deutsche Bank Securities Inc., BofA Securities, Inc., Capital One, N.A. and RBC Capital Markets, as joint lead arrangers, Deutsche Bank AG New York Branch, as administrative agent and collateral agent, and each of the other Lenders party thereto (Incorporated by reference to Exhibit 10.5 to TransUnion's Annual Report on Form 10-K filed on February 18, 2020). |
| 10.6 | Amendment No. 18 to Credit Agreement, dated as of December 10, 2019, by and among TransUnion Intermediate Holdings, Inc. (f/k/a TransUnion Corp.), Trans Union LLC, the Guarantors, Deutsche Bank Securities Inc., BofA Securities, Inc., Capital One, N.A. RBC Capital Markets, Wells Fargo Securities LLC and JP Morgan Chase Bank, N.A. as joint lead arrangers, Deutsche Bank AG New York Branch, as administrative agent and collateral agent, and each of the other Lenders party thereto (Incorporated by reference to Exhibit 10.6 to TransUnion's Annual Report on Form 10-K filed on February 18, 2020). |

10.7† TransUnion Holding Company, Inc. 2012 Management Equity Plan (Effective April 30, 2012) (Incorporated by reference to Exhibit 10.1 to TransUnion's Registration Statement on Form S-4 filed July 31, 2012).

10.8† TransUnion Holding Company, Inc. 2012 Management Equity Plan Stock Option Agreement (Effective April 30, 2012) (Incorporated by reference to Exhibit 10.2 to TransUnion's Registration Statement on Form S-4 filed July 31, 2012).

10.9† Amendment No. 1 to TransUnion Holding Company, Inc. 2012 Management Equity Plan Stock Option Agreement, dated as of January 1, 2016 (Incorporated by reference to Exhibit 10.7 to TransUnion's Annual Report on Form 10-K for the year ended December 31, 2015).

10.10 Form of Director Indemnification Agreement for directors of TransUnion (Incorporated by reference to Exhibit 10.6 to TransUnion's Registration Statement on Form S-4 filed July 31, 2012).

10.11† Employment Agreement with James M. Peck, President and Chief Executive Officer of TransUnion and TransUnion Intermediate Holdings, Inc., dated December 6, 2012 (Incorporated by reference to Exhibit 10.15 to TransUnion's and TransUnion Intermediate Holdings, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2012).

10.12† Letter Agreement between TransUnion and Reed Elsevier with respect to the employment of James M. Peck as the President and Chief Executive Officer of TransUnion and TransUnion Intermediate Holdings, Inc., dated December 6, 2012 (Incorporated by reference to Exhibit 10.16 to TransUnion's and TransUnion Intermediate Holdings, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2012).

10.13† Employment Agreement, dated as of November 13, 2018, by and between TransUnion and Christopher A. Cartwright (Incorporated by reference to Exhibit 10.1 to TransUnion's Current Report on Form 8-K filed on November 14, 2018).

10.14† Employment Agreement, dated as of November 13, 2018, by and between TransUnion and James M. Peck (Incorporated by reference to Exhibit 10.2 to TransUnion's Current Report on Form 8-K filed on November 14, 2018).

10.15† Amended and Restated TransUnion 2015 Omnibus Incentive Plan (Incorporated by reference to Exhibit 10.1 to TransUnion's Current Report on Form 8-K filed on May 18, 2020).

10.16† TransUnion 2015 Omnibus Incentive Plan Award Agreement with respect to Restricted Stock Units and Performance Share Units (U.S. Employees) (Incorporated by reference to Exhibit 10.2 to TransUnion's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016).

10.17† TransUnion 2015 Omnibus Incentive Plan Award Agreement with respect to Restricted Stock (Outside Directors) (Incorporated by reference to Exhibit 10.3 to TransUnion's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016).

10.18† TransUnion 2015 Employee Stock Purchase Plan, as Amended and Restated, Effective November 6, 2018 (Incorporated by reference to Exhibit 10.24 to TransUnion's Annual Report on Form 10-K for the year ended December 31, 2018).

10.19 Consent Order Issued by the United States Consumer Financial Protection Bureau on January 3, 2017, Administrative Proceeding—File No. 2017-CFPB-0002, In the Matter of: TransUnion Interactive, Inc., Trans Union LLC and TransUnion (Incorporated by reference to Exhibit 10.25 to TransUnion's Annual Report on Form 10-K for the year ended December 31, 2016).

| | |
|---|---|
| 21** | Subsidiaries of TransUnion. |
| 23.1** | Consent of PricewaterhouseCoopers LLP. |
| 23.2** | Consent of Ernst & Young LLP. |
| 24** | Power of Attorney - TransUnion (included on the signature page of this Form 10-K). |
| 31.1** | Certification of Principal Executive Officer for TransUnion pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. |
| 31.2** | Certification of Principal Financial Officer for TransUnion pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. |
| 32** | Certification of Chief Executive Officer and Chief Financial Officer for TransUnion pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. |
| 101.INS** | XBRL Instance Document |
| 101.SCH** | XBRL Taxonomy Extension Schema Document |
| 101.CAL** | XBRL Taxonomy Extension Calculation Linkbase Document |
| 101.DEF** | XBRL Taxonomy Extension Definition Linkbase Document |
| 101.LAB** | XBRL Taxonomy Extension Label Linkbase Document |
| 101.PRE** | XBRL Taxonomy Extension Presentation Linkbase Document |
| 104** | Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101). |

† Identifies management contracts and compensatory plans or arrangement.

** Filed or furnished herewith.

(4) Valuation and qualifying accounts.

(b) **Exhibits.** See Item 15(a)(3).

(c) **Financial Statement Schedules**. See Item 15(a)(2)

## ITEM 16. FORM 10-K SUMMARY

None.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on February 16, 2021.

TransUnion

By: /s/ Todd M. Cello

Todd M. Cello
*Executive Vice President and Chief Financial Officer*

## POWER OF ATTORNEY

The officers and directors whose signatures appear below constitute and appoint Heather J. Russell and Rachel W. Mantz as their true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for them in their name, place and stead, in any and all capacities, to sign and file, with the Securities and Exchange Commission, this Form 10-K and any and all amendments and exhibits thereto, and all documents in connection therewith, granting unto each such attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully and to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that such attorneys-in-fact and agents or their substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities indicated on February 16, 2021.

| Signature | Title |
| --- | --- |
| /s/ Christopher A. Cartwright<br>Christopher A. Cartwright | President and Chief Executive Officer, Director<br>*(Principal Executive Officer)* |
| /s/ Todd M. Cello<br>Todd M. Cello | Executive Vice President and Chief Financial Officer<br>*(Principal Financial Officer)* |
| /s/ Timothy Elberfeld<br>Timothy Elberfeld | Senior Vice President and Chief Accounting Officer<br>*(Principal Accounting Officer)* |
| /s/ George M. Awad<br>George M. Awad | Director |
| /s/ William P. (Billy) Bosworth<br>William P. (Billy) Bosworth | Director |
| /s/ Suzanne P. Clark<br>Suzanne P. Clark | Director |
| /s/ Kermit R. Crawford<br>Kermit R. Crawford | Director |
| /s/ Russell P. Fradin<br>Russell P. Fradin | Director |

| Signature | Title |
| --- | --- |
| /s/ Pamela A. Joseph<br>Pamela A. Joseph | Director |
| /s/ Siddharth N. (Bobby) Mehta<br>Siddharth N. (Bobby) Mehta | Director |
| /s/ Thomas L. Monahan, III<br>Thomas L. Monahan, III | Director |
| /s/ Andrew Prozes<br>Andrew Prozes | Director |

## Schedule I—Condensed Financial Information of TransUnion

**TRANSUNION**
**Parent Company Only**
**Balance Sheet**
(in millions, except per share data)

| | December 31, 2020 | December 31, 2019 |
|---|---|---|
| **Assets** | | |
| Current assets: | | |
| Other current assets | $ 0.3 | $ 0.1 |
| Total current assets | 0.3 | 0.1 |
| Investment in TransUnion Intermediate | 2,748.7 | 2,368.4 |
| Other assets | 6.3 | 6.5 |
| **Total assets** | $2,755.3 | $2,375.0 |
| **Liabilities and stockholders' equity** | | |
| Current liabilities: | | |
| Trade accounts payable | $ — | $ — |
| Due to TransUnion Intermediate | 211.4 | 126.4 |
| Other current liabilities | 1.4 | 0.8 |
| Total current liabilities | 212.8 | 127.2 |
| Other liabilities | 2.3 | 2.4 |
| **Total liabilities** | 215.1 | 129.6 |
| Stockholders' equity: | | |
| Common stock, $0.01 par value; 1.0 billion shares authorized at December 31, 2020 and December 31, 2019; 195.7 million and 193.5 million shares issued as of December 31, 2020 and December 31, 2019, respectively; and 190.5 million and 188.7 million shares outstanding as of December 31, 2020 and December 31, 2019, respectively | 2.0 | 1.9 |
| Additional paid-in capital | 2,088.1 | 2,022.3 |
| Treasury stock at cost; 5.2 and 4.8 million shares at December 31, 2020 and December 31, 2019, respectively | (215.2) | (179.2) |
| Retained earnings | 937.4 | 652.0 |
| Accumulated other comprehensive loss | (272.1) | (251.6) |
| **Total stockholders' equity** | 2,540.2 | 2,245.4 |
| **Total liabilities and stockholders' equity** | $2,755.3 | $2,375.0 |

See accompanying notes to condensed financial statements.

## Schedule I —Condensed Financial Information of TransUnion

**TRANSUNION**
**Parent Company Only**
**Statement of Income**
(in millions)

| | Twelve Months Ended December 31, | | |
|---|---|---|---|
| | **2020** | **2019** | **2018** |
| **Revenue** | $ — | $ — | $ — |
| **Operating expenses** | | | |
| Selling, general and administrative | 3.1 | 3.5 | 3.2 |
| **Total operating expenses** | 3.1 | 3.5 | 3.2 |
| **Operating loss** | (3.1) | (3.5) | (3.2) |
| **Non-operating income and expense** | | | |
| Equity Income from TransUnion Intermediate | 345.0 | 349.2 | 279.3 |
| Other income and (expense), net | 0.2 | — | (0.4) |
| **Total non-operating income and expense** | 345.2 | 349.2 | 278.9 |
| **Income from continuing operations before income taxes** | 342.1 | 345.7 | 275.7 |
| **Benefit (provision) for income taxes** | 1.1 | 1.2 | 0.9 |
| **Net income** | $343.2 | $346.9 | $276.6 |

See accompanying notes to condensed financial statements.

## Schedule I —Condensed Financial Information of TransUnion

**TRANSUNION**
**Parent Company Only**
**Statements of Comprehensive Income**
(in millions)

| | Twelve Months Ended December 31, | | |
|---|---|---|---|
| | **2020** | **2019** | **2018** |
| **Net income** | $343.2 | $346.9 | $ 276.6 |
| **Other comprehensive income:** | | | |
| Foreign currency translation: | | | |
| Foreign currency translation adjustment | 8.4 | 65.5 | (145.1) |
| Benefit (expense) for income taxes | 0.8 | (0.5) | — |
| Foreign currency translation, net | 9.2 | 65.0 | (145.1) |
| Hedge instruments: | | | |
| Net change on interest rate cap | 4.1 | (11.0) | 7.6 |
| Net change on interest rate swap | (43.5) | (35.4) | (10.7) |
| Cumulative effect of adopting ASU 2017-12 | — | 1.0 | — |
| Benefit for income taxes | 9.5 | 11.5 | 0.8 |
| Hedge instruments, net | (29.9) | (33.9) | (2.3) |
| Available-for-sale securities: | | | |
| Net unrealized gain | 0.3 | — | — |
| Expense for income taxes | (0.1) | — | — |
| Available-for-sale securities, net | 0.2 | — | — |
| **Total other comprehensive (loss) income, net of tax** | (20.5) | 31.1 | (147.4) |
| **Comprehensive income attributable to TransUnion** | $322.7 | $378.0 | $ 129.2 |

See accompanying notes to condensed financial statements.

## Schedule I —Condensed Financial Information of TransUnion

**TRANSUNION**
**Parent Company Only**
**Statement of Cash Flows**
(in millions)

| | Twelve Months Ended December 31, | | |
|---|---|---|---|
| | 2020 | 2019 | 2018 |
| **Cash provided by (used in) operating activities** | $ 70.8 | $ 71.7 | $ 16.6 |
| **Cash used in investing activities** | — | — | — |
| **Cash flows from financing activities:** | | | |
| Proceeds from issuance of common stock and exercise of stock options | 22.9 | 24.4 | 26.2 |
| Dividends to shareholders | (57.6) | (56.8) | (41.6) |
| Treasury stock purchased | (36.1) | (39.3) | (1.2) |
| **Cash (used in) provided by financing activities** | (70.8) | (71.7) | (16.6) |
| Net change in cash and cash equivalents | — | — | — |
| Cash and cash equivalents, beginning of period | — | — | — |
| **Cash and cash equivalents, end of period** | $ — | $ — | $ — |

See accompanying notes to condensed financial statements.

## Schedule I —Condensed Financial Information of TransUnion

**TRANSUNION**
**Parent Company Only**
**Notes to Financial Statements**

### Note 1. Basis of Presentation

In the TransUnion parent company only financial statements, the Company's investment in subsidiaries is stated at cost plus equity in the undistributed earnings of subsidiaries since the date of acquisition. The Company's share of net income of its subsidiaries is included in consolidated income using the equity method. The parent company only financial information should be read in conjunction with TransUnion's consolidated financial statements.

### Note 2. Income tax

TransUnion entered into an intercompany tax allocation agreement with TransUnion Intermediate Holdings, Inc. in 2013, effective for all taxable periods from May 1, 2012, forward, in which they are members of the same consolidated federal or state tax groups. The agreement allocates the consolidated tax liability from those filings among the various members of the group.

### Note 3. Dividends to Stockholders

On February 13, 2018, we announced that our board of directors approved a dividend policy pursuant to which we intend to pay quarterly cash dividends on our common stock. Beginning in the second quarter of 2018 and each subsequent quarter, the board of directors declared quarterly dividends of $0.075 per share. During 2020, 2019 and 2018, we paid dividends of $57.6 million, $56.8 million and $41.6 million, respectively. Portions of the dividends declared are payable as dividend equivalents to employees who hold restricted stock units when those units vest.

## Schedule II—Valuation and Qualifying Accounts

### TRANSUNION

| (in millions) | Balance at Beginning of Year | Charged to Costs and Expenses | Charged to Other Accounts | Deductions | Balance at End of Year |
|---|---|---|---|---|---|
| Allowance for deferred tax assets: | | | | | |
| Year ended December 31, | | | | | |
| 2020 | $53.3 | $12.6 | $3.7 | $ (3.8) | $65.7 |
| 2019 | $51.9 | $14.1 | $ — | $(12.7) | $53.3 |
| 2018 | $85.3 | $ 5.3 | $ — | $(38.7) | $51.9 |

*As a result of displaying amounts in millions, rounding differences may exist in the table above.*

**www.transunion.com**